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ABSTRACT

This study sought to identify and analyze critical factors in a Hispanic student's decision to persist or drop out at California state four-year institutions. In-depth telephone interviews with 151 Hispanic American students at five University of California campuses and seven California State University campuses were conducted. The interviews focused on the role of the Latino family, influence of peers, mentors, gender, finances, retention programs at target institutions, and campus climate. Findings included the following: (1) most of the students were from families with four or more children; (2) most indicated receiving strong encouragement and support in their academic endeavors from their parents; (3) eight of ten held jobs while attending college; (4) 75 percent of students worked off-campus; (5) 83 percent enrolled as full-time students; (6) the majority of students were living at or below the poverty level and depended on family for financial support; (7) the largest number attended California State University campuses, allowing many of them to live at home; (8) almost 60 percent of students felt the lack of financial aid was the most serious obstacle to the achievement of their educational goals; and (9) 77 percent felt welcomed on campus and felt no alienation. The most comprehensive retention programs were at the University of California, especially the Berkeley campus. (Contains 80 references.) (JB)

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LATINO PERSISTENCE IN HIGHER EDUCATION:

A 1994 Survey of University of California and California State University Chicano/Latino Students

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Guillermo Rodríguez, Jr.

Director for Policy & Research

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San Francisco, California

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Executive Summary

With support from the Ford Foundation, Latino Issues Forum conducted a study to examine significant factors that affect Chicano/Latino students' decision to remain at or leave a four year college or university in California. Chicanos/Latinos represent one of the largest and fastest growing minority groups in the United States. Early in the next century they will become the largest minority in America. As a state, California has the largest concentration of Chicanos/Latinos in the nation. In 1994, over eight (8) million Chicanos/Latinos live in California, representing about 28 percent of the state's population. The grade school dropout rate for Chicanos/Latinos is very high—30 percent, compared with 18 percent for non-Hispanic Blacks and 10 percent for non-Hispanic Whites. In school districts in California, the dropout rate for Chicanos/Latinos is almost 40 percent. The high school dropout rate has been relatively constant for the last 20 years in contrast to the declining rate for Black and White non-Hispanics.

The college going rate for Chicanos/Latinos continues to lag behind that of other ethnic/racial groups and Whites in California. Most college going Latino students, almost 70 percent, enroll at two year colleges, from which only seven (7) percent transfer to a four year institution. Hispanic students in California institutions of higher education have one of the lowest college retention and graduation rates among minority groups, and they lag significantly behind Whites. While Chicano/Latino college enrollments have increased slightly at four year colleges and universities over the last few years, their high dropout rate continues to exceed 50 percent. Limited Latino "retention" or "persistence" is often referred to as the "revolving door syndrome."

Latino Issues Forum, with Ford Foundation assistance, developed a strategy to identify and analyze critical factors in a Hispanic student's decision to continue her/his college studies at a four year institution or dropout. In-depth interviews of 300 students at five University of California campuses and seven California State University campuses were conducted as a part of this study.

A review of the literature was undertaken to identify key existing studies and research on Latino student persistence. Three important models surfaced that discuss theories advanced to explain the college persistence process. The two most widely cited and applied to the Latino community are Tinto's "Student Integration Model," and Bean's "Student Attrition Model." A third model reviewed is Astin's "Theory of Student Involvement" that bridges the gap between Bean's and Tinto's models. However, most Chicano scholars are not convinced that the existing models are persuasive in fully explaining the reasons for the persistence or withdrawal of Latino students.

It was decided to test factors that might be determinative in a student's decision to remain at a four year college/university or to withdraw. A structured questionnaire was developed that would be administered in a telephone interview. Several issues were important: role of the Latino family; influence of peers; mentors; gender; finances; retention programs at target institutions; and, campus climate. Additional factors were identified and included in the survey.

Over 150 students participated in the survey. Most Latino students were from families with four or more children—well above the national average. Most of the students indicated receiving strong encouragement and support in their academic endeavors from their parents. Eight out of ten Latino students surveyed held jobs while attending a four year college. Significantly, 75 percent of these students worked off-campus. Of the students surveyed, about 83 percent were enrolled as full-time students. The majority of students in our study were living at or below the poverty level and depended on family for financial support. The largest number of Latino students surveyed attended California State University campuses, allowing many of them to live at home. Most of the students at the University of California lived on or near a campus. Half of the students interviewed had a GPA between 2.6 and 3.0. Three out of ten had a GPA between 3.1 and 3.5. About 77 percent said that they felt welcomed on campus and did not feel any sense of alienation.

From a programmatic perspective the most comprehensive retention programs were at the University of California, especially the Berkeley campus. Within the California State University system, the Fullerton campus had a very well designed and comprehensive program. Several campuses had important niche programs, such as the high-at-risk student effort at Los Angeles State and programs that target farm workers and migrant families at Fresno State. Budgetary factors were reviewed to determine how well target campuses supported their retention efforts, particularly those for Latinos.

We have learned much about the background, motivation, and experiences of Latino college students in California's public four year colleges and universities. Additionally, we have uncovered fascinating information on programmatic efforts and budgetary levels of support for retention efforts at the target institutions. We have found important correlations that will require further investigation, in preparation for any informed discussion on optimal models, programs and efforts to encourage Chicano/Latino students to remain in college and earn a Bachelor's degree and beyond. We see these initial correlations as informing institutions of higher education in California, and elsewhere, to improve graduation rates of Latino students through the selected avenues and programs shown to enhance persistence.

Introduction

Our economy is dependent upon even more advanced training than is currently the case, and our social fabric depends upon an extension of educational success to more among us. We must recommit ourselves to the goal of having each segment of education more fairly approximate the ethnic, gender, and economic composition of our state. Morality and social conviction join hardheaded economics in this recommendation.

California Legislative Joint Committee For Review
of the Master Plan For Higher Education, 1988

In the 1980s, the issue of college student retention was in vogue. News reports and special commissions were abundant, examining the root causes why a student would pursue or abandon a formal higher education goal. Conferences were held and legislative hearings were called to further understand how colleges and universities could retain students. The issue of retention is of particular concern for minorities. While African American and Latino† student enrollments increased in the 1980s, many of the students never graduated. For many Latino students, college was a revolving door—the institutions granted admission to Latinos, but little was done to ensure they succeeded. According to a study by the American Association of State Colleges and Universities, the overall six-year graduation rate for freshmen who entered state schools in 1986 was 30 percent for Latinos, 27.5 for African Americans and 43.2 percent for Asian Americans.[1] This means that well over half of all Latinos who gained admission to an institution of higher education in 1986 never completed their degree. In addition, the U.S Department of Education states that of all 1980 high school graduates in the United States, only 6.7 percent of Latinos completed a Bachelor's degree by 1989, compared with 21 percent for non-Hispanic Whites and 29 percent for non-Hispanic Blacks.[2]

In the 1990s, student retention has lost its priority among the concerns of colleges and universities. However, for minorities, retention is a vital concern. It is interesting that even the use of the term "retention" has declined. Now, colleges and universities use the term "persistence." This change from "retention" to "persistence" indicates that a university or college no longer takes the responsibility for "retaining" students; it is now the student's responsibility to "persist" through college. Using either terminology, the statistics continue to be grim for Latinos.

In an effort to revive the issues surrounding Latino persistence in higher education, Latino Issues Forum,[3] with the support of the Ford Foundation, developed a comprehensive pilot project to examine and review current policy and programs designed to further the success of the Latino college student. Unlike traditional approaches to persistence, Latino Issues Forum

† The terms Chicano, Latino, Hispanic, and Raza will be used interchangeably to avoid repetition. They connote men and women. African American and Black are also used interchangeably.

1 American Association of State Colleges and Universities, Washington DC, August 15, 1994. Also see: *The Oakland Tribune*, "Few Blacks, Hispanics graduate from college." Monday, February 28, 1994.

2 U.S. Department of Education, National Center for Education Statistics, High School and Beyond and National Longitudinal Study Surveys, November 1989.

3 Latino Issues Forum (LIF) is a non-profit California based public policy and advocacy institute dedicated to advancing policy concerns and recommendations from a Latino perspective. LIF's primary focus is on the broader issues of access to higher education, economic development, universal access to health care, regional development, and telecommunication issues.

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sought to examine the interaction of the Latino family with institutions of higher education. The goal of the study was to learn how retention programs at institutions of higher education affect a Latino college student's decision to remain in school. This study also looked at how cultural issues, parental involvement, and socioeconomic status contribute to Latino students' success or failure in completing academic goals.

The decision by Latino men and women students to remain in or leave college during their first and second years of study is very significant. There continues to be a very high drop-out rate among Latinos attending four year colleges and universities during these first critical years. While numerous studies have been conducted to determine the magnitude of and reasons for this high drop-out rate, not enough is known about the factors that encourage these students to remain in college. Several published studies identify significant factors that result in a student dropping out. Three of the most widely discussed reasons are lack of adequate financial assistance, academic difficulties that may stem from limited secondary school preparation, and cultural issues. Within the latter category, there are a myriad of conditions that may influence a Latino student to leave a four year university.

When Latinos students enter college, they have no "natural" support system. Many are the first in their family to attend college. Thus, they do not have a historic support structure to ease the transition from high school to college. All students, regardless of race or ethnicity, experience a shock in the transition from high school to college. However, many Latino students also experience a cultural shock. The absence of a natural support system coupled with cultural shock become alienating factors in a Latino students' perception of college. This alienation may grow exponentially as each day passes. For example, many Latino students do not come to campus equipped with computers or other resources to prepare them for the rigors of academic coursework and are often unfamiliar with support services that are available to them. Many Latino students go through college without ever having experienced such services as career planning and placement centers, academic tutoring, or attended professor's office hours and other essential programs that could further their academic goals.

There are equally significant factors that encourage a student to remain in college. One such factor is the presence of effective retention programs — those which target Latino students, and are inter-disciplinary, which prevent or slow the feeling of alienation, and prepare the Latino student to effectively compete in college. It is important, therefore, to learn which factors are most influential in triggering a student's decision to leave the university. And of even greater significance is our need to know what critical factors encourage a Latino student to remain in college.

California was chosen as the site for this pilot study for several reasons.

It has the largest Latino population in the United States. It has a well developed public higher education structure that includes two highly regarded four year systems, the California State University and the University of California. Institutions participating in this study from the University of California included UC Irvine, UC Los Angeles, UC Riverside, UC Berkeley and UC Santa Cruz. California State University campuses included in this study were: Fullerton, Los Angeles, Long Beach, Northridge, Pomona, Fresno, and San Jose.

We hope this study will encourage college and university administrators to re-examine their efforts and strategies to help Latino students to persist at the lower division, move into an upper division major and graduate.

Review of the Literature

The matriculation of Latinos at four year colleges and universities is a fertile area for study. There are several reasons for the importance of this subject. Latinos will, before 2010, be the largest minority group in the United States. In the states of Arizona, California, New Mexico, and Texas, they already represent the largest minority group in each population. While the enrollment of Latinos in the K-12 schools of the western United States continues to outpace those of other groups, Latinos suffer serious problems. Many attend inner city schools that are crowded and under-financed. Others are increasingly attending schools and educational programs where Whites and other groups are not present. And because of limited resources, programs that provide assistance to develop English language and other basic skills are not always available. These and other factors result in Chicano/Latino dropout rates that are, aside from those of Native Americans, the highest in the nation. For example, in 1990, the high school dropout rate for Latinos was 30 percent. That is, 3 of every 10 Latinos between the ages of 16 and 24 had not completed high school. The comparable figure for non-Hispanic Blacks was 18 percent and for non-Hispanic Whites, it was 10 percent.[4] These conditions influence the number of Latino students prepared to attend two and four year colleges.

While the enrollment of Latino students at colleges and universities continues to increase, there are disturbing issues that must be considered carefully. Graduation rates for Latinos at four year institutions are considerably lower than for Whites and Asians, and slightly lower than for African Americans. Moreover, the time required to graduate for Chicanos is longer than for most other groups in the student population, with the college dropout rate much higher than for Whites and Asians. These facts indicate serious challenges that must be addressed to improve Latino persistence in college.

As California is home to the largest population of Latinos in any state,

4 *Hispanics' Schooling: Risk Factors for Dropping Out and Barriers to Resuming Education*. GAO/PEMD-94-24 (Washington DC: July 1994).

and has a well developed system of higher education segments—the California Community Colleges (CCC), the California State University (CSU), the University of California (UC), and the Association of Independent California Colleges and Universities (AICCU)—it represents an excellent laboratory to examine conditions that influence Latino students to remain in college and earn a four year degree, or to give up on higher education. Moreover, the matriculation of Chicanos in California is of great importance to other states and the nation. Latino graduates of California four year colleges and universities, when compared to other states, constitute the largest share of Latino students who go on to receive doctorates and medical degrees. It is imperative, therefore, that every effort be made to understand what factors contribute to Latino persistence and graduation rates in California.

Numerous statistical studies provide quantitative data on the number of Latino students earning the BA/BS, and on dropout rates, yet it is important to focus attention on studies that discuss underlying factors that condition behavior among this student population. Statistical studies alert us to conditions that pose serious problems, but, on the whole, they do not attempt to explicate and analyze conditions that persuade Chicanos to dropout or stay in college. With this in mind, it was decided to identify studies that explored and reflected on attitudes and behavior patterns influencing students' decision-making about continuing or leaving their academic studies at a four year institution.

Two studies that have been widely cited and applied to the Latino student experiences are Tinto's Student Integration Model[5], and Bean's Student Attrition Model.[6] Tinto's model has been widely discussed in the literature and used as an explicator for student attrition. Pascarella and Terenzini seem to favor it and have applied it in their investigations. Moreover, Tinto's model lends itself to use at different types of institutions with differing student populations. In contrast to Tinto's, Bean's model requires substantial modification to explain the persistence process among non-traditional students. Tinto's theory basically asserts that the match between a student's motivation and academic ability and the institution's academic and social characteristics may combine to form two underlying commitments: commitment to an educational goal and commitment to remain at the institution. Consequently, the stronger the motivation for college completion and/or the level of institutional commitment, the higher the probability of persisting in college. Bean's model stresses that student attrition is analogous to turnover in work organizations and underscores the importance of behavioral intentions (to stay or leave) as predictors of college persistence. While it is not our purpose to explore either model in depth, it is important to do a quick comparison between them.

5 Tinto, V. *Leaving College: Rethinking the Causes and Cures of Student Attrition*. Chicago, IL: University of Chicago Press, 1987.

6 Bean, J. P. "Interaction effects based on class level in an exploratory model of college student dropout syndrome." *American Educational Research Journal*, 22 (1985), 35-64.

Both models regard persistence as the result of a complex set of interactions over time. They also hold that pre-college characteristics affect how well the students will adapt to an institution. Further, both models argue that persistence is affected by the successful match between the student and the institution. There are, however, some important differences between the two models. Bean's model emphasizes the influence of factors external to the institution in affecting attitudes and behavior. It regards academic performance as an indicator of academic integration. Tinto's model regards college grades as an outcome variable resulting from academic experiences and social-psychological processes.

Experiments with both models by Hossler[7], Pascarella[8], and Terenzini[9] surface a different perspective about what most affects college persistence. The Student Integration Model (Tinto) suggests that academic integration, social integration, institutional commitment and, to some extent, goal commitment, exert the highest influence on persistence. The Student Attrition Model (Bean) emphasizes the role of intent to persist, attitudes, institutional fit, and *external factors* in the form of *family approval* of institutional choice, *friends' encouragement to continue attendance*, financial matters, and perceptions about the opportunity to transfer to another institution once a decision to withdraw is made. To some researchers concerned with the successful matriculation of Chicano students at four year colleges and universities, Bean's model appears to be a better paradigm for use with Latinos. Others, however, favor Tinto's model, but with considerable modification.

A recent study by Cabrera, et al.[10] reveals that the Student Integration Model offers wider application. However, when judged in terms of explaining deviation in the persistence criterion, the Student Attrition Model is better able to account for more of the observed variances. Important parts of both models can be used to identify key factors that determine whether a Latino student remains or withdraws from a four year institution. Tinto's model may identify significant institutional culture norms and the premium a student places on them. If his or her motivation to accommodate to the institutional climate is not high, the student may not remain on the campus. Equally important are external factors, such as *family* and *friends* that may condition a student's persistence. It is this interplay between the two models, one stressing institutional considerations and the other drawing attention to external factors that prompted the duality of our investigative strategy.

We believe that campus climate, the institutional environment and culture[11] at four year colleges or universities, influence in a significant way the decision of Latino students to remain or leave. At the same time, there are important factors external to the institutional environment that play a determining role in a Latino student's persistence. It was decided to review different studies and writings that addressed one or both themes and possibly

7 Hossler, D. *Enrollment Management*. New York: College Entrance Examination Board, 1984.

8 Pascarella, E. T. & P. T. Terenzini. "Predicting freshman persistence and voluntary dropout decisions from a theoretical model." *Journal of Higher Education*, 51 (January/February 1980), 60-75.

9 Terenzini, P. T., W. G. Lorang & E. T. Pascarella. "Predicting freshman persistence and voluntary dropout decisions: a replication." *Research in Higher Education*, 15 (1981), 109-127.

10 Cabrera, A. F., M. B. Castaneda, A. Nora & D. S. Hengstler. "The Convergence between two theories of college persistence." *Journal of Higher Education*, 63 (March/April 1992): 143-164.

11 Kuh, G. W. and E. J. Witt, in their book *The Invisible Tapestry: Culture in American Colleges and Universities* (Washington, DC: Association for the Study of Higher Education, 1988) identify and discuss the properties of institutional culture and examine how cultural perspective have been used to describe life in colleges and universities.

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identify a synergistic interplay between them. Several prominent studies were uncovered and are discussed below.

The enrollment of large numbers of minority students in the late 1970s at predominantly White colleges and universities has resulted in some vexing problems. Since the early 1980s there has been a disturbing regressive trend in the enrollment, academic performance and successful matriculation of minorities. The Smedley, et al.[12] study attempts to account for this regressive trend at a major university. The results of this study provide empirical support for the hypothesis that socio-cultural and contextual stresses play a significant role in the adaptation of minority freshmen at a predominantly White institution. While the study is not ethnic specific—though it tends to highlight African Americans—it raises some important issues that may have broad application in higher education. Such studies generally conclude that minority students may experience considerable psychological sensitivity and vulnerability to a campus social climate that raises interpersonal tensions between themselves and White students and faculty; the tensions are exacerbated by experiences of actual or perceived racism, racial biases and other forms of discrimination. These disruptive influences on students have been noted by Burbach, Pascarella (1986), and Tracey. However, there are other non-institutional factors that also influence minority students. Abalos, in his work on the Latino family, makes a strong case for understanding the considerable sway a Latino family has on a daughter or son in such areas as career choice, self identify, and education.[13] The role of the family is also underscored in Keefe's research on the extended family as an emotional support system in the Mexican American community.[14] Other studies by Madrazo-Paterson,[15] Munoz[16] and Murillo[17] reinforce the thesis regarding the influence the Latino family exerts on students.

It is important to mention another hypothesis that has been advanced to understand student persistence in college. Astin[18] has reviewed student attrition and formulated a theory of student involvement that bridges the gap between Bean's and Tinto's models. Rather than focus on value judgments regarding the type of integration, he places a premium on the amount of energy a student devotes to the college experience. According to Astin, "students learn by becoming involved."[19] His concept represents a middle ground between socio-psychological explanations of student development and the influence of campus climate.

Two other researchers should be mentioned. In her study on Chicano student attrition at three Texas colleges, Nora found that academic and social integration did not have significant direct effects on retention.[20] She found that the most significant direct effects on retention in the study were the institutional and goal commitments of the students. Studies by Rendon yield similar results.

12 Smedley, B. D., Myers, H. F. & Harrell, S. P. "Minority-status stresses and the college adjustment of ethnic minority freshmen." *Journal of Higher Education*, 64 (July/August 1993), 434-452.

13 Abalos, D. T. *Latinos in the United States: The Sacred and the Political*. Notre Dame, IN: Notre Dame Press, 1986.

14 Keefe, S. E., Padilla, A. M. & Carlos, M. L. "The Mexican American extended family as an emotional support system." In Casas, J. M. & S. E. Keefe (Ed.), *Family and Mental Health in the Mexican American Community*. Monograph No. 7. Los Angeles: UCLA Spanish Speaking Mental Health Research Center, 1978.

15 Madrazo-Paterson, R. & M. Rodriguez. "Minority students' perceptions of a university environment." *Journal of College Student Personnel*, 19 (1978), 259-264.

16 Munoz, D. "Identifying areas of stress for Chicano undergraduates." In Olivas, M. A. (Ed.), *Latino College Students*. New York: Teachers College Press, 1986. 131-156.

17 Murillo, N. "The Mexican American family." In N. Wagner (Ed.), *Chicanos*. St. Louis: Mosby, 1971.

18 Astin, A. W. "Student involvement: a developmental theory for higher education." *Journal of College Student Personnel*, (July 1984), 297-308.

19 Astin, A. W. *Achieving Educational Excellence*. San Francisco: Jossey Bass, 1985.

20 Nora, A. "Determinants of retention among Chicano college students: a structural model." *Research in Higher Education*, 26 (1987), 31-59.

No matter how much time is devoted to a review of pertinent literature on successful/unsuccessful minority student college matriculation, there is still too little agreement on key factors that are determinative. *Chicano scholars are not convinced that the existing models are persuasive in fully explaining the reasons for the persistence or withdrawal of Latino students.* There are two emerging schools of thought that attempt to provide an explanation for Latino student continuation or drop-out in higher education. One hypothesizes that pressures caused by circumstances external to the college environment (e.g., family and financial responsibilities) are major determinants in decision-making. The other highlights environmental factors, such as campus climate, that marginalize Chicanos and contribute to their sense of alienation. Perhaps, as has been suggested by several leading Chicano scholars, an interplay between both suppositions might be desirable.

With respect to Latinas, numerous studies have been done by the Bureau of the Census, Astin, and the U.S. Commission on Civil Rights that capture data on their persistence. The most recent data available show that women of Mexican origin have a lower college completion rate than their male counterparts. Results from the 1980 Census indicated that Chicanas were only half as likely as Chicanos to complete a college degree. Data from the 1990 Census reveal that Chicanas have improved their college graduation rate and narrowed the gap with Chicanos. However, the lower levels of persistence and graduation of Chicanas are disturbing and require additional study perhaps leading to the development of corrective strategies.

There is general agreement among researchers about several factors that cause considerable distress for Latinas opting to enroll at a four year institution. Many Mexican American women experience intense role conflict when aspiring to education and professional careers, rather than the traditional role of wife and mother. This seems to occur most in first and second generation families. *When first or second generation Chicanas must live away from home while attending college, they suffer considerable stress.* Where possible, gender differences will be noted in this study.

Summary: A synthesis of the various studies on attrition/persistence of Latino male and female students yields interesting perspectives. Chicano student characteristics correspond closely with variables influencing attrition as hypothesized by Tinto. The quality of academic preparation at the high school level, and personal motivation are important factors that influence persistence. On the other hand, Bean's Student Attrition Model recognizes that factors external to the institution can play a major role in affecting attitudes and decisions while the student is attending college. The influence of family, friends and significant others in the Latino community also plays a key role in students' decision making. The literature review also reveals critical factors that affect Latino student persistence. *With a hospitable institu-*

tional environment, the social integration of Chicanos is enhanced and contributes positively to their persistence. Family and peer support, as well as the level of education of the parents and their income, are important contributors to persistence. Finances are critical in the persistence decision, especially for Chicano students from lower economic backgrounds. Gender differences are significant, suggesting that the educational experience for males and females may differ in important ways. With the information and suppositions provided by a review of pertinent literature, this study proceeded to investigate the role of social integration by Latino students as a determinant of persistence, and how institutional efforts to create a hospitable and supportive campus environment could influence their matriculation and graduation.

The Latino Family: Factors affecting Persistence

Scholarship dealing with abstract factors that lead to a student's decision to remain or drop out of school has primarily focused on traditional students, with a few recent studies devoted to African Americans. Latinos, however, do not have a long history in higher education in the United States. Consequently, much traditional scholarship in the area of retention may not apply to Latinos in higher education. While research has been conducted on the non-traditional student, very little scholarship incorporates the unique characteristics of the Latino family and the important role the family plays in retention.

It is important to make a few comments and provide a brief overview of the characteristics that make up the Latino family. Understanding the role and nature of the Latino family will provide a better insight in understanding the connection between the Latino college student and her/his family.

The Latino community in California represents 28 percent of the total population. Latinos are California's largest, youngest and fastest growing minority population. In 1992, the Current Population Survey (CPS) showed that the median age of Latinos was 26 years compared to 34 years for non-Latinos. Among Hispanic subgroups, those of Cuban origin were the oldest with a median age of 40, while those of Mexican origin were the youngest with a median age of 24 years.[21] In the 1990 census, 63 percent of Latino families had children under 18 living with the family, compared to 47 percent for non-Latino families. Latino families are the most likely of any group to live in poverty; nationally, 29 percent of Latinos were considered to be below the poverty level compared to 12.9 percent of non-Latinos.[22]

While these statistics may imply an unconventional environment in which to foster postsecondary educational goals, Latino family behaviors and attitudes, however, are positive and conducive to supporting educational goals. Latinos have a higher labor force participation rate than other ethnic

21 CPS, Series P-20, No. 465.
22 Ibid.

groups in California (80.2 percent of Latino males 16 years and above compared to 73 percent for non-Latino Whites),[23] low welfare/public assistance utilization, strong sense of family formation (e.g. two parent households), and good health indicators. In addition, the Latino family maintains strong nuclear and extended family networks, which are used for many functions. The support for higher education among Latinos is great. For example, a recent opinion poll conducted by the California Higher Education Policy Center stated that:

> For Latinos, the single most important goal is "giving minorities such as Blacks and Latinos opportunities to succeed." Seventy-three percent of Latinos describe this goal as "extremely important" as compared to only 43 percent of the non-Latino population.... California's Latino population, then, is even more likely to see higher education as an essential path to opportunity and success.[24]

Evidence is strong that, with the means it has available, the Latino family is very much involved and supportive of higher education.

For Latino college students, their families are central to their lives, and the family shares the Latino student's educational experience. In other words, the experiences, emotions and decisions that a Latino college student makes are shared with her/his family. Likewise, the experiences of the family are shared with the college student. However, when college demands compete with family responsibilities, the Latino student will often leave school to tend to family matters. For example, in 1982, the Irvine Foundation funded a study to examine the participation of Hispanics in higher education. The Irvine Report concluded that:

> Although Hispanics perceive education as a key to social mobility, families of extremely limited financial means cannot afford to provide an environment that encourages students to pursue or complete education. In many cases, higher education is not seen as an option for young people, especially women, approaching adulthood. For students a strong sense of commitment to family and community frequently competes with academic responsibilities. Both men and women cited the need and desire to assist the family financially or to be at home during a time of family stress as reasons for dropping out or taking a break from school.

It is important to note that the Latino family plays a key role in determining the successful matriculation and graduation of the Latino college student. Colleges and universities must recognize the role that the family plays when developing strategies to retain Latino college students.

23 California Department of Finance, 1991.

24 Immerwahr, John and Farkas, Steve: *The Closing Gateway. Californians Consider Their Higher Education System.* A Report by the Public Agenda Foundation for the California Higher Education Policy Center, September 1993.

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Institutional Responses for Latino Persistence

The target universities contacted in the Latino Persistence Study were asked to provide information on programs and activities designed to improve student retention and successful graduation. The focus of the study was to identify factors most influential in a Latino college student's decision to remain at or leave a four year institution. Information was requested in two parts. The first was for types of programs and activities developed by the campus to encourage Latino students to continue their studies and progress toward graduation. The second asked for the annual funds budgeted to support these efforts. While the responses differed, there were important parallels.

Programmatic Efforts. There are several important components to a well structured retention program that contribute to the successful graduation of students. In general, retention efforts should strengthen a Latino student's *motivation* to remain at the university and graduate; the *enhancement of basic skills* and *learning behavior,* and the provisions of a *hospitable campus climate* for minority students. However, not all efforts are designed explicitly for Latino students. Consequently, while a general overall approach targeting minority students will have a significant impact on a mixed ethnic/racial clientele, it may not be as influential for Latino students.

Most of the better retention programs for at-risk students include a combination of pre-college projects, financial aid programs and on-campus retention services. Moreover, the high school to college transition efforts, also known as summer bridge projects, play an important role in the best comprehensive programs for student retention.[25] The organizational loci for many retention programs tend to be in student services or academic support services.[26] The latter is usually within the jurisdiction of academic affairs. In such units, non-tenure track instructors and other academic staff provide a variety of services that may include counseling, financial aid, mentoring, remedial instruction, and tutoring. These programs generally *do not* draw attention from regular faculty. Moreover, instructors and tutors in academic support and student services programs are *usually* not part of the regular teaching faculty.

Several campuses reviewed in this study provided only the basic elements of a retention program. That is to say, they worked with students only when they were attending the institution and were encountering academic difficulties. These programs provided remedial services designed to develop learning skills and improve academic performance. Not all colleges and universities provided additional support for at-risk students in summer sessions and between semester/quarter breaks. Further, at many of the institutions canvassed, there was little or no effort to differentiate among at-risk students

25 Only a handful of the campuses surveyed had comprehensive programs to encourage minority student retention.

26 Retention efforts at many of the campuses surveyed were often located within Economic Opportunity Programs or Educational Equity Programs.

based on their culture, language or social orientation. The drop-out rate for Latinos was high at these campuses.

There exist significant differences between basic retention programs and more ambitious ones. As mentioned previously, a basic retention program involves working with students once they are enrolled in the institution. Individual tutoring is usually not provided. Instead, group sessions are available for students with academic difficulty in basic courses of science, mathematics and English. While there may be monitoring of Economic Opportunity Program (EOP) students, and those in similar programs (Educational Equity), coordinating the variety of services and activities on a campus for at-risk students can be cumbersome and difficult to negotiate.[27] Whenever a campus lacked organizational methods for cooperation that included faculty participation, selection of students, transition to the institution, and testing and referral services to pinpoint and address areas that required attention, Latino student retention was low.

Comprehensive retention programs included pre-college recruitment; summer school-to-college transition; testing and counseling; basic learning skills development; and follow-up services for those having non-academic problems that could influence their decision to leave or stay. Moreover, the more successful programs provided ways for regular faculty to meet and work with at-risk students. Retention efforts, such as the ones at California State University, Fullerton and the University of California at Berkeley, provided two examples of a wide array of services and intervention strategies to encourage and assist target students to remain at the institution and complete their academic studies. In a few cases, such as at Los Angeles State University, specific programs were in place to work exclusively with Latino men and women students. The Los Angeles State University program focused on high at-risk Latino students.

Two of the comprehensive retention programs mentioned above will be discussed briefly. The University of California at Berkeley's retention program provides an example of different types of program elements at a major research institution that contribute to student retention and successful graduation. While Berkeley is a highly selective institution, it has devoted considerable thought and energy to identify factors that influence the graduation of students. Moreover, it is constantly researching and reassessing key factors that influence retention at Berkeley and at comparable universities. The institution begins by gauging carefully the academic preparation of prospective minority students, and it differentiates among ethnic/racial groups.

Once admitted to Berkeley, Latino students, and their families, are called and encouraged to participate in a school-to-college transition program called Summer Bridge. This program is designed to assist students with adjusting to the academic rigors and demanding campus environment.

27 The lack of centralization and/or coordination becomes very apparent when the budgets and allocations for retention services are reviewed.

Regular teaching faculty at Berkeley is involved in this effort. During the student's first two years at Berkeley, she/he is carefully monitored by different groups on the campus. Information on potential at-risk students is shared by units within the division of Undergraduate Affairs, and within academic units, such as the College of Letters and Science, that monitor a student's scholastic performance. Financial aid, housing, advising, counseling, and a variety of academic tutoring and general workshops on study skills, time management, note-taking, and the like are provided. Moreover, there are parallel services offered by Latino student groups. The Chicano Studies Program offers a one-unit course in which freshmen examine issues that ease or impede their transition to life at Berkeley. At Berkeley, Chicano and non-Latino faculty play important roles in helping students adjust to the campus. To bind together and strengthen educational and co-curricular programs, the Provost for Undergraduate Affairs heads the Campus Council on Student Retention. The Council coordinates planning among the various campus units concerned with undergraduate success. Campus-wide activities to promote diversity are sponsored by the Multicultural Action Team under the direction of the Dean of Student Life (currently the highest ranking Chicano administrator on the campus). Both in the variety and quality of services offered and in the coordination of organizational responses to minority students, the retention efforts at Berkeley are impressive, especially for Latino students.

California State University at Fullerton has a broad base of retention programs targeted for underrepresented students, as well. Its Educational Opportunity Program offers pre-admission counseling, admissions, referrals for tutorial and learning assistance, career guidance and financial aid advisement to underrepresented ethnic students. It offers a residential summer bridge program to assist students' transition from high school or a two year college to the university. Student Support Services at Fullerton are designed to achieve higher college retention and graduation rates for underrepresented participants. This effort fosters a supportive institutional climate for potential at-risk students. Several related programs include: a Student Study Center for tutorials and study skills enhancement; the Intensive Learning Experience for basic training in English and mathematics; and Student Academic Services that provide academic advisement and counseling to students, especially minorities admitted through EOP and Student Affirmative Action. All together there are over 15 components to the Fullerton campus retention program. The programs are well funded and centrally coordinated. Latino students represent well over 50 percent of the students in these programs. Closely related to these efforts is a Faculty Academic Intervention Program that is designed to provide proactive faculty involvement in advising probationary students in six academic disciplines. All of these activities

come under the umbrella of the Academic Vice President at Fullerton. This results in well organized and coordinated activities to enhance student retention and higher graduation rates, especially for Latinos.

California State University at Los Angeles has a pilot program specifically targeted at Latino students. With a modest grant from the National Science Foundation, each year a small number of high-risk Latinos are identified and recruited to Los Angeles State. Many of the students in this program did not take college preparatory courses in high school. Some are older students making important changes and sacrifices in their lives to attend college. A key ingredient in this program is intensive faculty interaction with the students. Moreover, a Latina vice president and full professor in psychology monitors the program and provides important input and resources. The Latino students in this program would not normally be recruited nor admitted to Los Angeles State. It is interesting to note that their retention rate is higher than the campus average. While this program deals with a limited number of students each year, 50 at the most, it works extremely well with a Latino clientele that on paper is considered highly at-risk. Yet their success rate is truly impressive.

Among the campuses that try to provide specific services to Latino students and their families, California State University at Fresno is an interesting example. Their focus is on Latino students from farm worker backgrounds and has two parts: the University Migrant Services; and the College Assistance Migrant Program. Together they provide services to Latino students and their families.

Budget Matters. Determining the allocation of resources for retention efforts at the various colleges canvassed was a challenge. While the size of the budget for such efforts was important, the type and allocation of resources was significant. Many of the campuses provided a lump sum allocation for retention efforts. However, the dollar amounts provided included resources to cover services that were not specifically germane to Latino students and retention. On one campus, funding for the learning assistance center was included as part of its budget for retention efforts. However, on closer examination, fewer than 5 percent of Latino students ever used this service. The center mainly provided services for students planning to attend graduate and professional schools. Latino students requiring academic support services were usually referred to the EOP office for assistance. The Berkeley and Los Angeles campuses of the University of California and the Fullerton campus of the California State University were exemplary in providing extensive information. They listed the various programs and provided dollar amounts for each one, and an estimate, in percentages, of Latino students using the services of the respective units.

The type of funding used for retention efforts was also important to

review. Most of the retention services targeted for underrepresented students were funded by non-state resources. Non-state monies, mainly from U.S. governmental agencies, were used to support almost 70 percent of retention services at the state supported campuses reviewed. Two campuses of the University of California—Berkeley and Los Angeles—used more of their own resources to support retention efforts, especially services that targeted underrepresented students. At these two University campuses, student fees were used to augment the resources for minority student retention. The Berkeley campus was unique in coupling student fee monies, University funds, U.S. governmental allocations, and other resources to assist specific ethnic/racial group students persist on the campus. This concentration of resources may explain why Latino retention at Berkeley appears to be above the average.

Several questions surfaced when the budgets and the categories or types of funds involved were reviewed. If the student profile on a campus was changing to include more minorities, why were academic support services and student services resources not being reallocated to serve the needs of this clientele? If the number of Latino students on a campus was rising sharply, and would continue to increase, were new budget allocations available to address their needs? And, by looking at previous budget allocations for persistence efforts, it was possible to determine whether the resources for these efforts were static, had decreased or increased. At several campuses, funds for retention efforts had declined in the past two years because of budgetary problems faced by the State of California.

Summary. It appears that the larger and better financed campuses of the University of California have developed effective strategies and programs to encourage Latino students to continue their studies and graduate. Their programs tend to be well designed and subject to considerable assessment and review. Moreover, they are usually much better supported financially than programs at other four year universities. There are some impressive efforts and programs at the California State University to encourage Latinos to stay in college. Three come to mind quickly: Los Angeles State, Fresno and Fullerton. Fullerton has an excellent, comprehensive approach toward retention that attracts a large percentage of Latino students. Fresno State targets a rural Latino clientele that includes migrant families, people often underserved and forgotten in higher education. Los Angeles State has made impressive strides in a program to work with a select group of highly at-risk Latino men and women who may include single parents, school drop-outs and re-entry students.

It is impressive to learn that institutions such as Berkeley and UCLA design and pattern their retention efforts in ways that take advantage of research done on student persistence by Tinto, Bean, Pascarella and Astin.

Moreover, the University of California programs reviewed, while comprehensive in their approach, did provide ethnic specific support that targeted Latino groups.

The review and analysis of campus budgets for retention efforts revealed important insights on institutional commitment. Again, the better programs coupled different types of resources to address persistence concerns and supportive activities for at-risk students. At two campuses, in spite of overall state budget cut-backs, the dollar amounts available for retention efforts, especially for Latino students, remained constant or increased slightly. At other universities in this study, no *reallocation* of resources to support persistence efforts in the divisions of student services and academic support services has occurred. This is puzzling, especially where minority students—particularly Latinos—are a rapidly increasing part of the undergraduate population. In a few cases, resources earmarked for minority retention efforts could not be spent until the end of the budget year. From an outside perspective, this appears to be a savings device that negatively influences at-risk Latinos and other underrepresented students.

Good programmatic development that incorporates current theories and practices to enhance Latino student persistence is essential for a strong retention program, whether specialized and tailored to a specific clientele like the Migrant Program at Fresno State, or a comprehensive one such as that at Berkeley. Adequate and long term budgetary support is critical for a successful persistence program. Institutional commitment can be measured by a university's resolve to continue providing adequate funds for retention efforts even in the face of State of California budgetary short-falls and cuts to higher education budgets. And finally, as Latino students become a larger percentage and number of students at many of the target institutions, campuses that do not allocate academic support/student services funds to address the needs of this clientele appear highly suspect.

The Latino Persistence Survey

For this survey, we identified 300 students who are or were enrolled in one of the university campuses participating in the study. Not all campuses of the University of California and the California State University system were chosen. In our selection, we considered the size of the university campus, and whether it is in a rural or urban area. Participating campuses included: University of California Irvine, Los Angeles, Riverside, Berkeley and Santa Cruz; California State University at Fullerton, Los Angeles, Long Beach, Northridge, Pomona, Fresno and San Jose.

Participants for this study were randomly chosen, following a set of criteria, by each participating campus. From the 300 students identified, 151 in-depth telephone interviews were completed, averaging one half hour per interview. The greatest obstacle encountered in our survey research was the great number of non-usable contacts. Many students, when we attempted to contact, had moved and left no forwarding number. However, of the students surveyed, the information provided was invaluable in our efforts to understand why they chose to remain or leave college.

Of the 151 Latino students participating in this study, two-thirds (62%) were females and one-third were males. The largest number of students in the study were attending CSU Fullerton, followed by CSU Northridge, UC Berkeley, and UC Irvine. The smallest number of student responses were

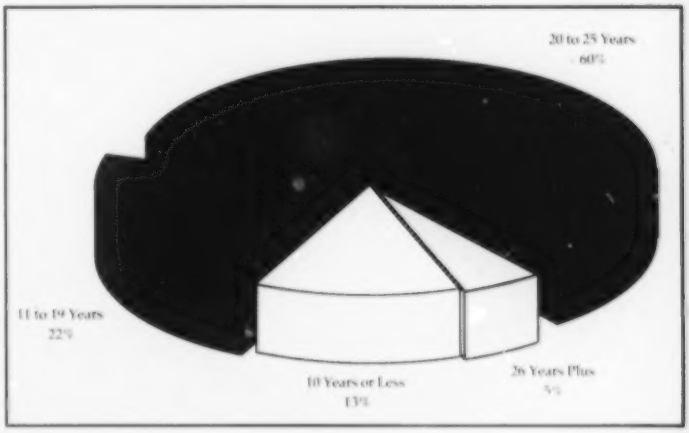
Table 1
Colleges Attended by Students Surveyed

Institution	Number	Percent
UC Berkeley	19	13 percent
UCLA	1	1 percent
UC Irvine	12	8 percent
UC Riverside	6	4 percent
UC Santa Cruz	5	3 percent
CSU Los Angeles	5	3 percent
CSU Long Beach	5	3 percent
CSU Northridge	21	14 percent
CSU Fresno	14	9 percent
CSU Fullerton	30	20 percent
CSU San Jose	8	5 percent
CSU Pomona	3	2 percent
Not Attending	20	13 percent
Other	2	1 percent
Total	**151**	**100 percent**

from CSU Pomona, CSU Long Beach, CSU Los Angeles, and UC Santa Cruz. For comparative purposes 13 percent of the Latino students included in this study were not currently enrolled as university students but had formerly matriculated at a California State University or a University of California campus (See Table 1).

While every effort was made to obtain a representative sample of Latino students from each of the campuses in the California State University and University of California systems, logistics, expense and time constraints prevented this ideal situation from materializing. Unfortunately, in some cases active cooperation from the administration of certain campuses within the California State University and University of California systems was lacking and the necessary data was not made available.

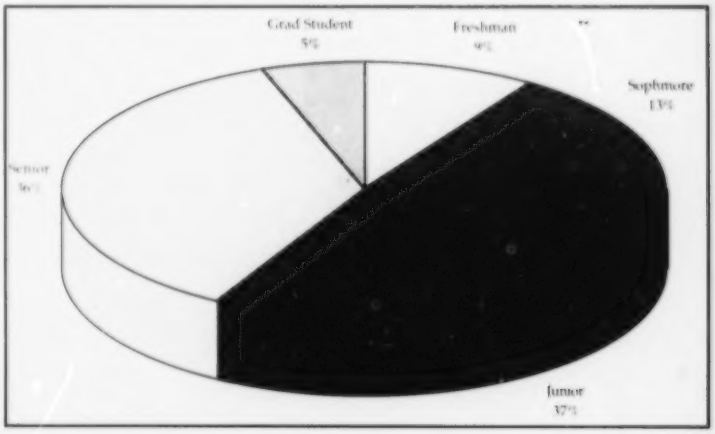
Figure 1
Years of Residence in California



Eight out of ten (81%) students in this study were 24 years of age or younger. The relative age of the Latino student population is slightly below the average for undergraduates overall in the California State University system, but about average in the University of California system. The age of our student sample is also related to the fact that Latinos, as a group, are nine years younger than the White population in California. Only one out of four students (19%) surveyed was 25 or older.

Eight out of ten of the students were 24 years of age or younger. Six out of ten have lived in California from 20 to 25 years, which for most of the students was their entire life. One out of five had lived in California for 11 to 19 years. Only one out of seven had lived in this state for 10 years or less (See Figure 1).

Figure 2
Student Class Level



Three out of four students were either juniors or seniors in college. In view of their age, this indicates that most of the students enrolled in college directly from high school. Only one out of ten students was a freshman, one out of seven a sophomore, and only five percent were graduate students (See Figure 2).

In the California State University system today, the average undergraduate student attending full time takes five years to complete a bachelor's degree, compared to four and a half years for undergraduate students in the University of California system. There is an expectation that the length of time for completion of a bachelor's degree will increase during this decade. This dramatic increase to completion of a college degree can be attributed in large part to the budget cuts that have occurred in California's system of higher education and to the significant reduction in class offerings over the past five years in

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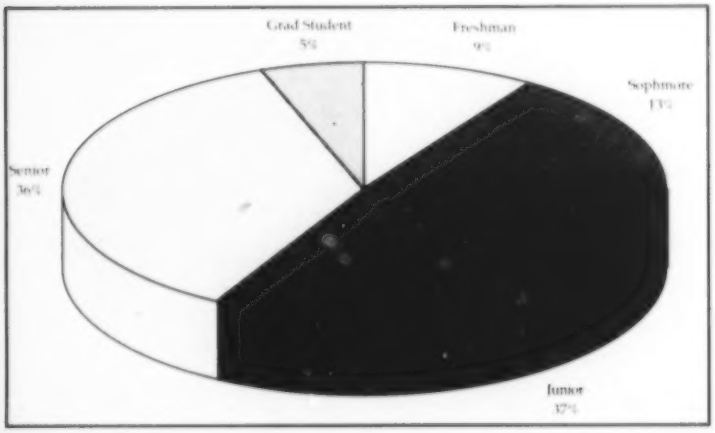
both the California State University and University of California systems.

The length of time required to graduate is also affected by the economic resources available to students, and the fact that many students, especially those in the California State University system, must work to support themselves. Both of these factors are particularly germane to understanding the educational challenge that nearly all minority students must face.

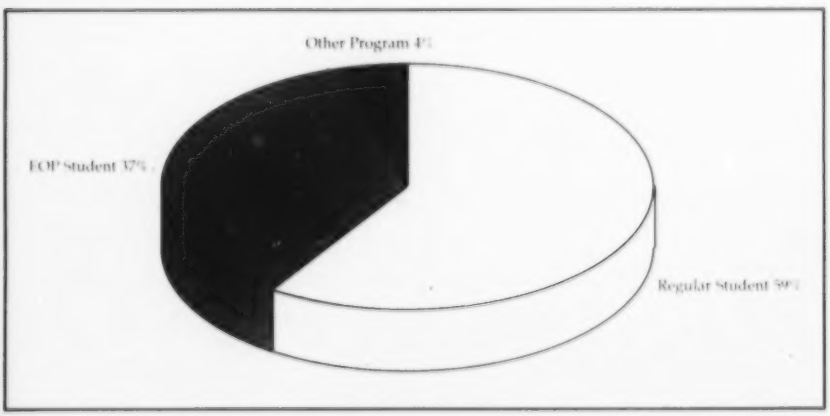
Figure 3
Number of Years Attending *College*



One out of five students surveyed had spent more than four years in college, while an equal number was enrolled in college for one year or less. And one out of four had spent three to four years in college. The fact that almost half (43%) of the students had spent more than three years in college is related to their upper division status in the university (See Figure 3).

Three out of four (77%) entered the California State University or the University of California systems directly from high school. The usual pattern for Latino high school graduates who go to college is to attend a community college for two years and then transfer to a four year institution, usually one of the California State University campuses. It is important to note that for the majority of Latino students, matriculation in a community college is usually a terminal experience.

Figure 4
Type of Student Admission



Of the students in this sample, only one out of four (23%) was a community college transfer. The low number of community college transfers may explain the high proportion of juniors and seniors in our study.

Slightly more than one-third of our students enrolled in the university as EOP students. The Economic/Educational Opportunity Programs on the various campuses provide assistance to minority students in making the transition to college. Based on our results, it appears that a significant number of the students in the study took advantage of this program. On the other hand, it is also significant to observe that six out of ten students were regularly admitted to the university (See Figure 4).

The students in the study were interviewed in the Fall of 1993 and we discovered that six out of ten had graduated from high school since 1990. Once again this supports our earlier observation that the majority of students in this study entered college promptly from high school. Only three out of ten graduated from high school between 1986 and 1989, and only one

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Year	Number	Percent
1985 or Earlier	17	11 percent
1986-1989	42	28 percent
1990	44	29 percent
1991	26	17 percent
1992	17	11 percent
1993	4	3 percent

Table 2
Year Students Graduated from High School

out of ten graduated prior to 1985 (See Table 2).

It is often the case that college graduates postpone marriage, and, on average, marry at an older age than high school graduates. Therefore, since three out of four of our students were 24 years of age or younger, it is not surprising that four out of five (83%) were still single. Only one out of seven (15%) of our students was married and only 2 percent of the students was separated or divorced.

The fact that a high proportion of the students in this study were still single may indicate a strong commitment to their long term educational goals. Postponing marriage while attending college may be significant, given a strong cultural emphasis on marriage and the creation and maintenance of family ties in many Latino communities.

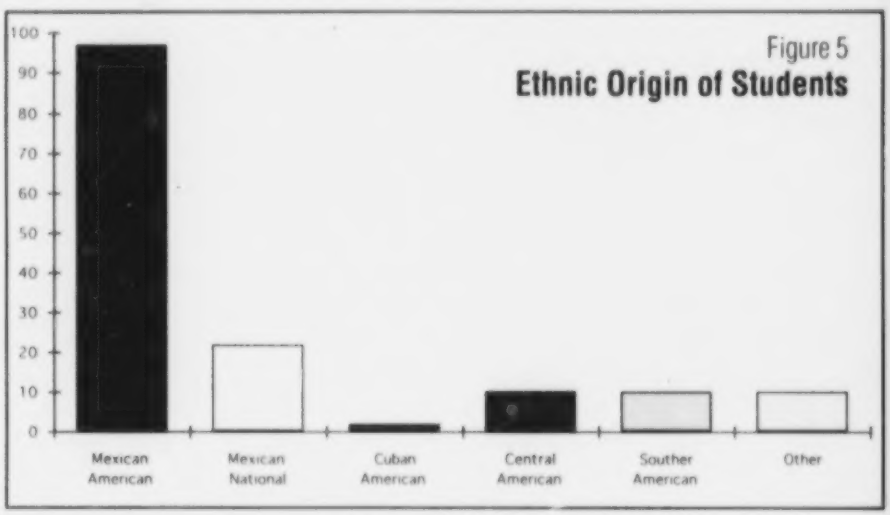


Figure 5
Ethnic Origin of Students

While there are distinct groups within the Latino community, some share a common language and culture, and yet have unique cultural and historical backgrounds. The largest of the Latino groups in the United States are the Mexican Americans, followed by the Puerto Ricans, and Cubans.

The largest group of Latinos in this study was Mexican American, with two out of three students self-identifying as Mexican Americans. One out of seven self-identified as Mexican nationals; thus, eight out of ten respondents were of Mexican origin. Seven percent of the students identified as Central Americans and an equal number as South Americans (See Figure 5).

A review of the distribution of majors among the students reveals that

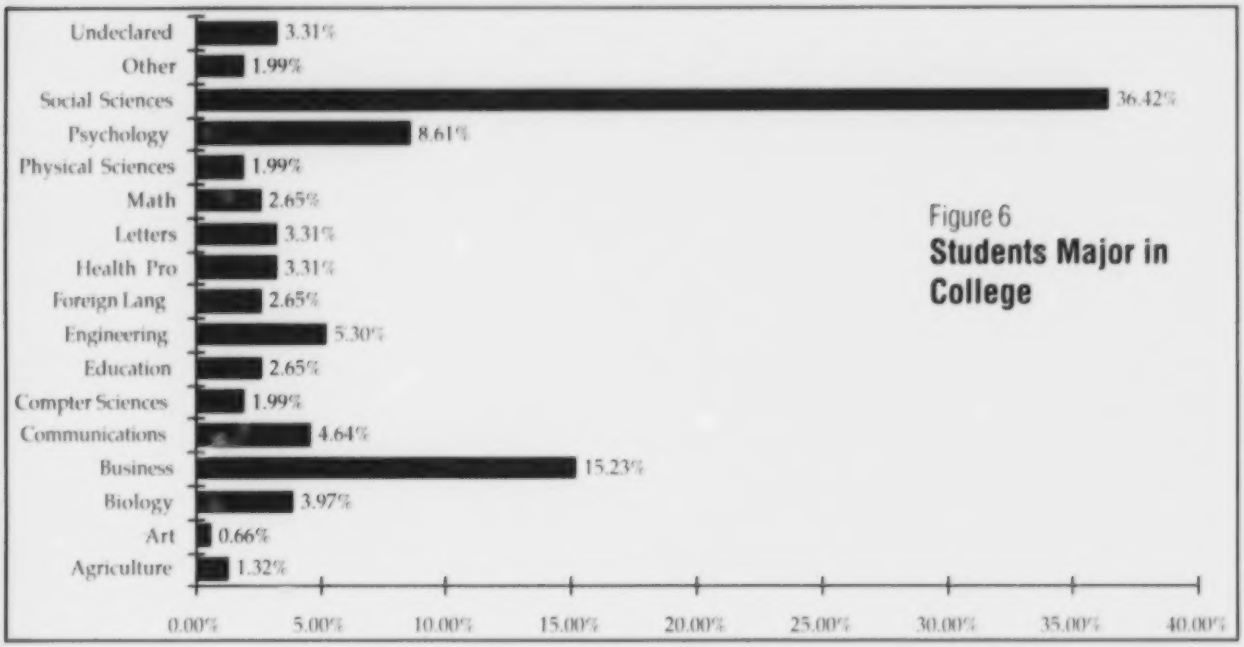


Figure 6
Students Major in College

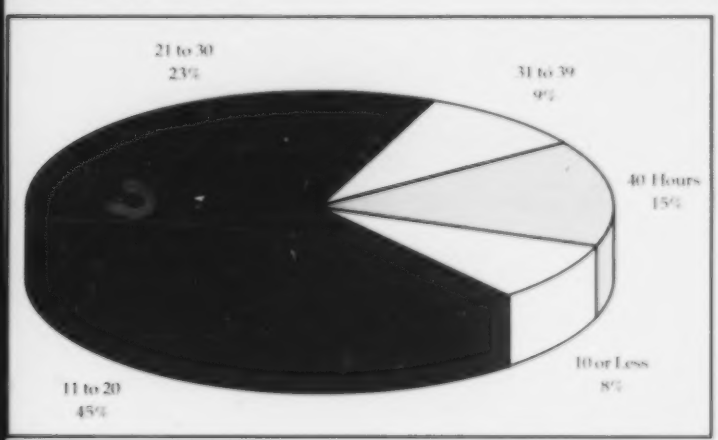
the largest concentration was in the social sciences. Business students represented the second largest concentration, and psychology majors were third (See Figure 6).

Overall, most of the students majored in one of the social sciences or humanities fields. The smallest concentration of Latino students was in math and science programs. In general, this pattern is very common to Latino students. This distribution of disciplines may evidence a strong desire that Latino students have in learning more about themselves and the various social problems facing their communities.

Student Employment

Eight out of ten students (78%) held jobs while attending classes. The fact that such a high proportion of full-time students worked while enrolled for full time course loads reveals the financial stress and strain under which these students live. It is obvious that such a high level of time devoted to work and university studies leaves little time for themselves or their families.

Figure 7
Number of Hours Worked per Week

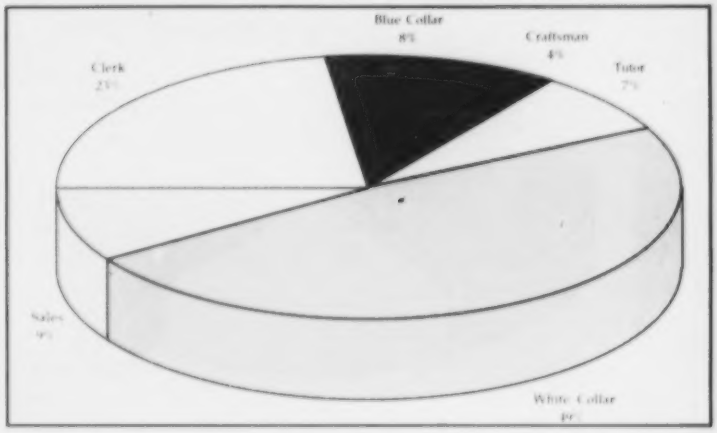


Of the students employed, three out of four (75%) were employed off campus; one out of four therefore, held jobs on campus. *This is a very important fact, specifically, that only a small proportion of Latino students secures jobs on campus.* Campus jobs not only pay more than many off campus jobs, but these jobs are usually easier, more flexible, and often are related to the student's area of study. On-campus jobs also offer greater support and opportunities to students.

In this regard, it is important to note that less than one out of ten

(8.5%) students in this study received support from a scholarship program. One out of four (26%) had to apply for student loans to pay for books and tuition. Another significant discovery was that almost two-thirds (62%) were receiving financial assistance from their families. This finding strongly supports the Latino cultural belief that the family should help the children achieve as high a level of education as possible. In effect, the college experience is truly a family experience for Latino students.

Figure 8
Students' Occupation



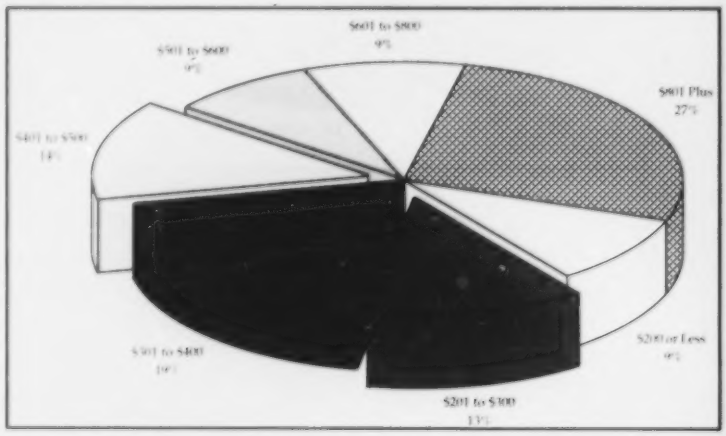
Most of the students in this study (85%) worked fewer than 40 hours a week. In view of their class loads, it is not surprising that almost half of the students worked between 11 to 20 hours a week; one out of four worked 21 to 30 hours a week; and one out of seven worked 40 or more hours a week (See Figure 7). Among the employed students, only one out of seven (15%) held jobs that were related to some type of financial aid program.

Of the employed students (78%), seven out of ten (72%) held white collar or clerical positions. One out of ten students worked in sales and seven percent worked as tutors. Overall only 12 percent of the students in the study held jobs at the lower economic scale (See Figure 8).

Student Income

Since most of the students held part-time jobs, it is not surprising to find that two out of five (41%) earned less than $400 a month. Only one out of four earned $800 or more per month (See Figure 9). It is clear that the majority of the students in this study are living at or below the poverty level and depend on family support while they are enrolled in college.

Figure 9
Student Income After Taxes



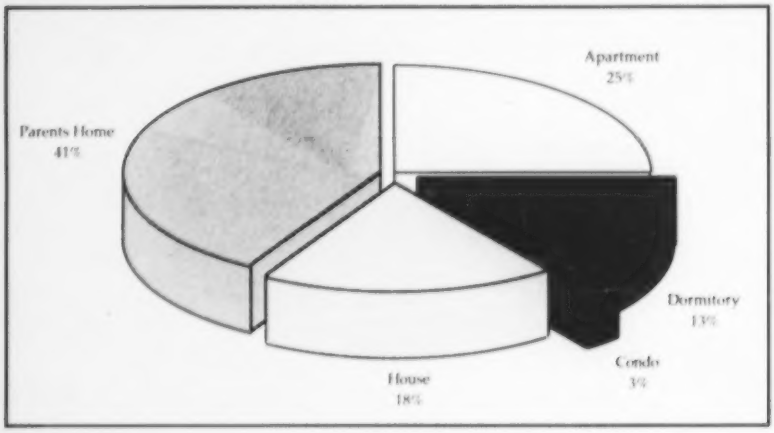
Housing and Transportation

The majority of California State University campuses are recognized as primarily commuter campuses, while a significant number of University of California campuses are viewed as primarily dormitory campuses. This may be one indication why more Latino college students attend California State University campuses, since this arrangement allows students to live at home with their parents, and thereby reduce their living expenses.

In our study two out of five students were living at home with their parents, while one out of seven lived in a dormitory. One out of four students

lived in an off campus apartment, while one out of five lived in a house or condo (See Figure 10).

Figure 10
Type of Student Housing

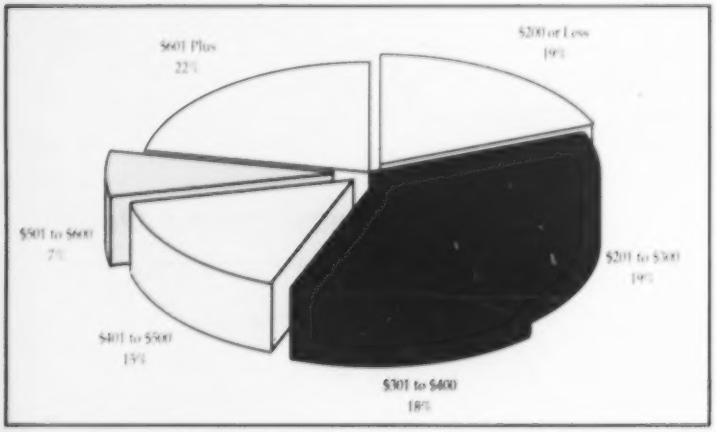


The majority of students living at home were attending one of the California State University campuses, while most of the students living in a dormitory or apartment were enrolled at a University of California campus. Those students living in a house or condo were usually sharing the household with other students.

Of those students who were paying rent (56% of the sample), half of them were paying $400 or less per month. At the upper end of the housing market, one out of five student were paying $600 or more per month (See Figure 11).

Since four out of ten of the students were living with parents, it is not surprising that three out of five live five or more miles away from campus. Only one out of seven actually lives on campus and an equal number lives within walking distance of the campus (See Figure 12).

Figure 11
Monthly Rent Paid by Latino Students

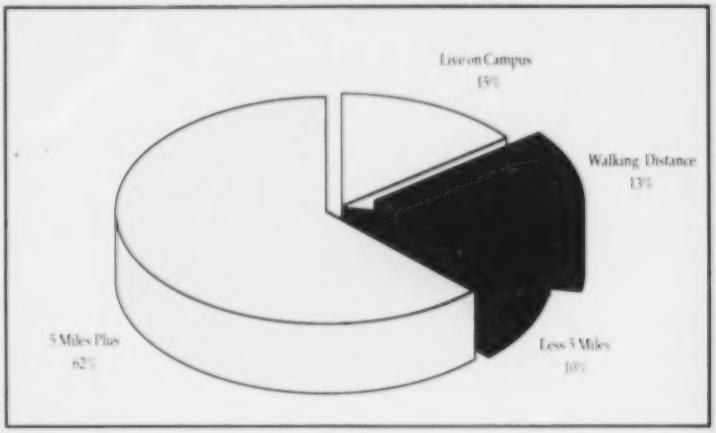


These figures indicate that only a small number of students can be totally immersed in the life of the campus community and have the opportunity to experience college life in any traditional sense. In view of their work and study obligations, and the need to commute to campus, most of the students spend a minimal amount of time on campus. This finding supports our concern that Latino students do not have the luxury to participate fully in campus life. In fact, according to Tinto's student integration model, Latino students' lack of campus participation may lead them to feel a sense of not belonging to the campus and with few incentives to stay.

The savings that many of our students realize by living at home, with, or in off campus housing, is often off-set by the expenses incurred by commut-

ing and parking fees. Six out of ten of the students drive their own cars to campus, while only a handful share a ride or use public transportation. One out of four students said they walked to campus. Most of these students live either on campus or less than a mile away (See Figure 13).

Figure 12
Student's Commute Distance to Campus



Study Habits

Three out of ten students in this study said they spend between 11 and 15 hours a week studying. One out of five spends from 16 to 20 hours a week preparing for classes. Only one out of seven said that he or she spends more than 20 hours a week studying (See Figure 14).

In sum, most of the students studied 20 hours a week, 12 to 15 hours a week are spent in class, and their work schedules occupied from 15 to 30 hours a week. We can estimate that commuting to campus or driving to work takes an additional ten hours a week. As with most students, Latino students in this study are very short of free time.

When asked to estimate their current GPA, we discovered that half of the students said their GPA was somewhere between 2.6 and 3.0. Three out

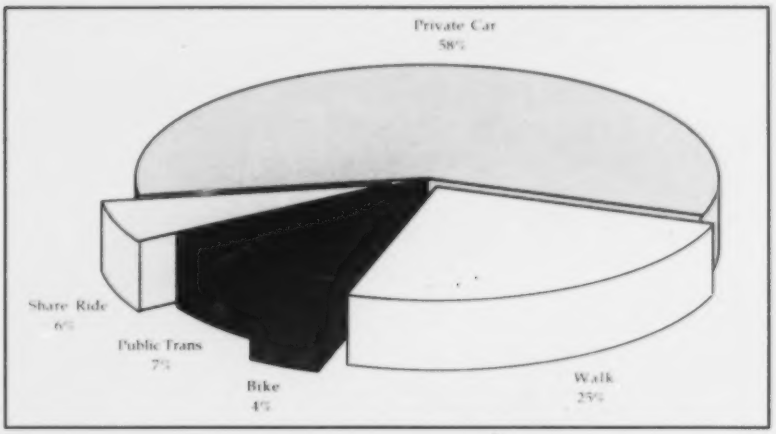


Figure 13
Transportation Used by Students

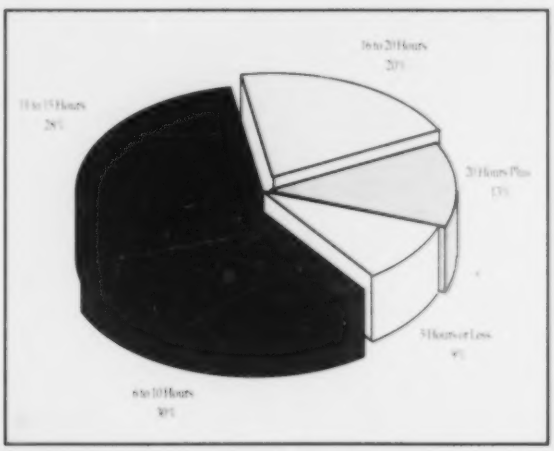


Figure 14
Numbers of Hours Spent Studying per Week

Table 3
Students' Grade Point Average

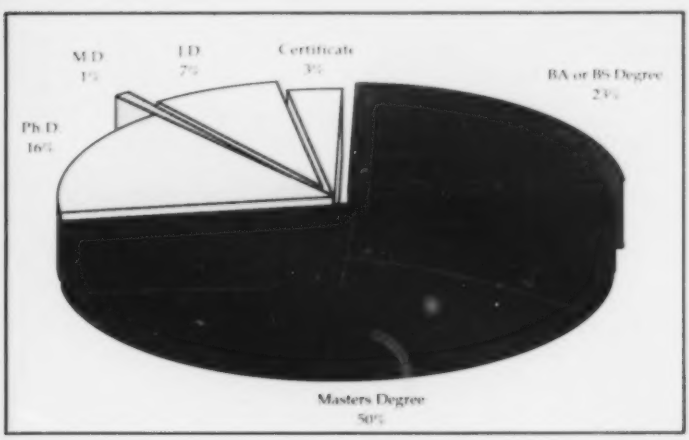
GPA	Number	Percent
2.5 or Below	30	21 percent
2.6 to 3.0	66	46 percent
3.1 to 3.5	41	28 percent
3.6 to 4.0	7	5 percent

of ten felt that their GPA was between 3.1 and 3.5. Only five percent said that their GPA was higher than a 3.6 (See Table 3).

Overall, half of the students estimated their GPA at a C or C+ average. This level of academic achievement may be due to the fact that most students work part-time and have other family responsibilities that deprive them of valuable study time. Obviously, students with GPA's below 2.5 are those that could best be served by tutoring and benefit from other student support services.

Despite the hardships and obstacles faced by the students surveyed, they were nonetheless optimistic about achieving their educational goals. Half of them stated that obtaining a masters degree was their ultimate academic goal. One out of four stated that a bachelors degree was their highest academic goal. It was encouraging to discover that a significant number of students (16%) wanted to continue their graduate studies and obtain a Ph.D. in their field of interest. Almost one out of ten said their goal was to obtain a professional degree, either in medicine or law. It is heartening that three out of four (74%) planned to enroll in a graduate program in the near future (See Figure 15).

Figure 15
Highest Degree Students Expect to Earn



Student Advising and Support

One of the most important factors affecting the academic success of minority students is the quality of advising and counseling that they receive. This is particularly true for minority students who enter the university system directly from high school, as is the experience for most of the students in this study. The transition and adaptation to campus life is particularly difficult for minority students who find themselves on a large University of California campus, a places that has a reputation for being cold and alienating.

Despite the large size of most California State University and University of California campuses, it is surprising that the students in this study did not

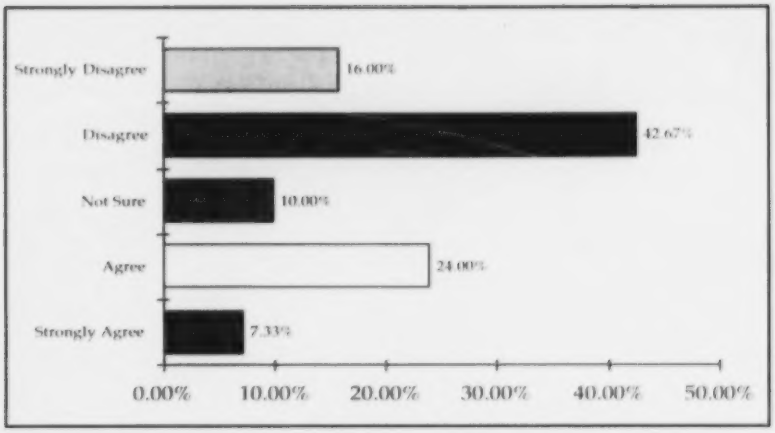


Figure 16
Are Students Culturally Disadvantaged?

experience a serious level of alienation. Indeed, three out of four (77%) said they felt welcomed on campus and did not feel alienated. When asked if they felt culturally disadvantaged, six out of ten said they did not. Only three out of ten students felt they were culturally disadvantaged while on campus (See Figure 16).

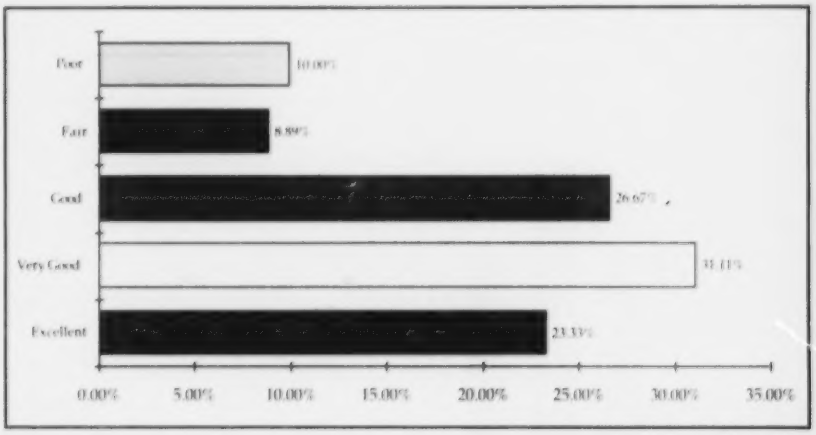


Figure 17
Quality of Students' Orientation

When the students were asked their opinion regarding the quality of student orientation, half rated their orientation as either very good or excellent. One out of four said it was good, and only one out of ten rated it as fair. Only one out of ten rated their orientation as poor (See Figure 17).

To learn more about the type of advising services the students relied upon, we asked them to state specifically whom they sought when they needed academic advise or counseling. Six out of ten used the services of the campus counseling center. Roommates or friends served as the second most important source of advise for the students (See Figure 18).

When asked if they preferred a counselor or academic advisor of their

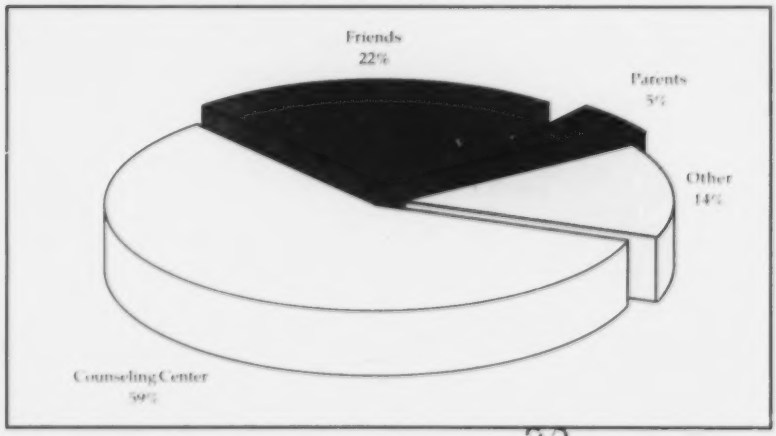
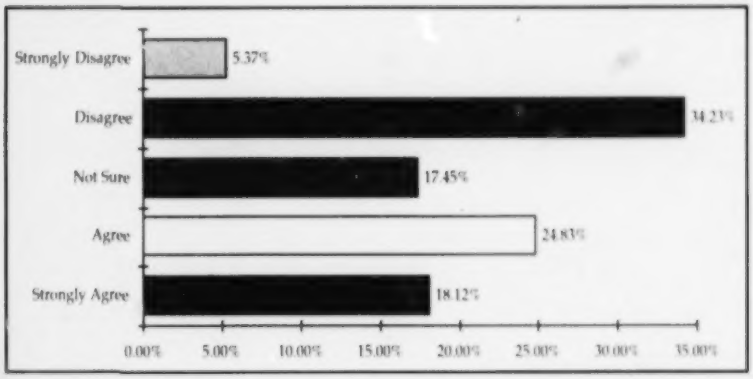


Figure 18
Type of Advising Utilized by Students

Figure 19
Students' Preference for Race of Advisor



own ethnicity, two out of five (43%) either agreed or strongly agreed that this was important to them. On the other hand, two out of five disagreed or strongly disagreed with this statement (See Figure 19).

Students were asked to rate their relationship with their professors. One out of three described their relationship as good and one out of four said it was very good. On the downside, one out of four said their relationship with their professors was fair and one out of ten said it was poor. Only seven percent characterized their relationship with their professors as excellent (See Figure 20).

On a related issue, we asked if they felt their professors were interested in them as students. The most consistent response to this question (63%) was that their professors were only fairly interested in them. And one out of seven felt that their professors were not interested at all. At the other end of the continuum, one out of six students felt that their professors were extremely interested in them (See Figure 21).

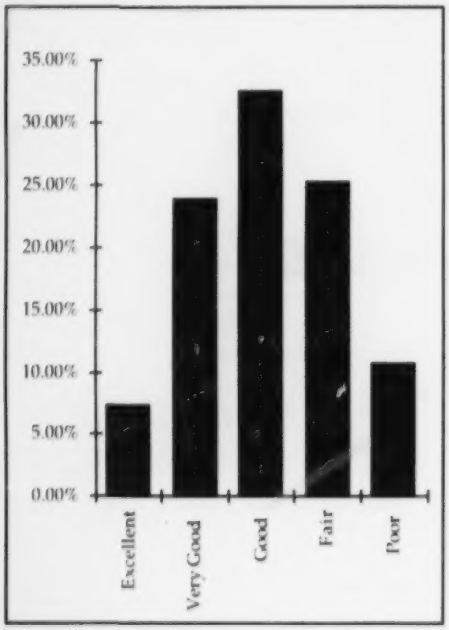


Figure 20
Students' Relationship with Professors

In sum, it appears that most of the students felt that their professors demonstrated a minimal interest in them as individuals or as students. This reaction, by these students may simply reflect the fact that the number of minority faculty on both the California State University and University of California campuses is less limited, fewer than seven percent. The total number of tenured or tenured track Chicano faculty on the ten University of California campuses today is less than two percent. The proportional representation of Chicano faculty in the California State University system is the same. The limited number of Latino faculty and role models may be an important factor in the retention and graduation of Latino students.

When asked about the interest of their friends in their academic progress, one-third of the students said they felt their friends were extremely interested. Half felt their friends were only fairly interested and one out of seven said their friends were not interested at all (See Figure 22).

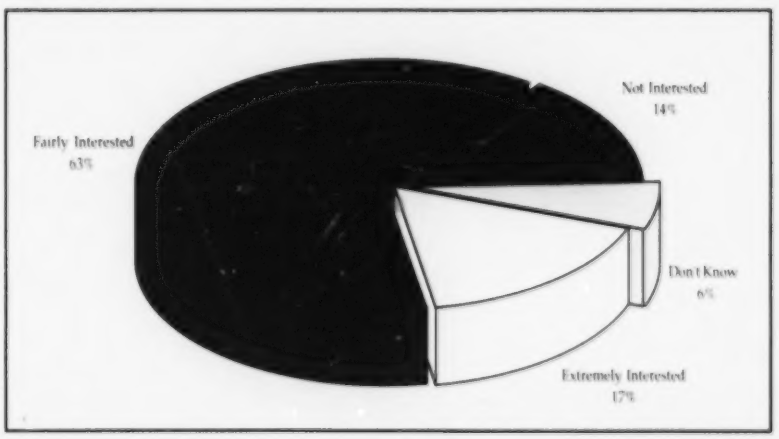


Figure 21
Professors' Interest in Students

Very important sources of support and encouragement for the students are their parents and families. When asked if they thought their parents were interested in their academic progress, seven out of ten said their parents were extremely interested. Only one out of four described their parents as being fairly interested (See Figure 23).

When asked to describe their relationships with other Latino students on campus, one out of five described his or her relationship as excellent and almost two out of five said their relationships were very good. One out of seven said their relationship with other Latino students was fair. Only six percent described their relationship as poor (See Figure 24).

Overall, four out of five described their relationships with other Latino students as ranging from good to excellent. Only a very small number

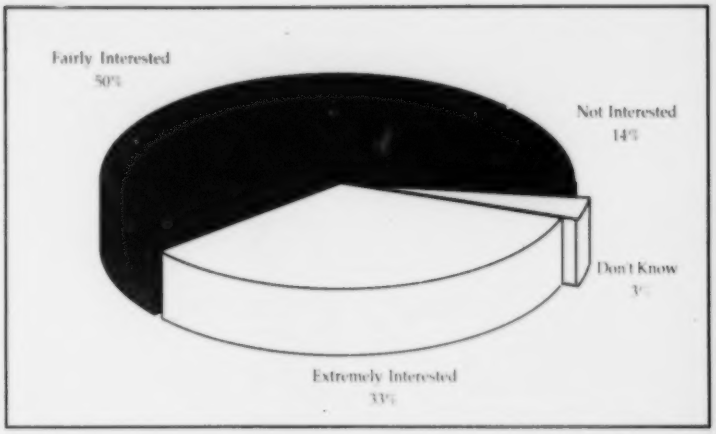


Figure 22
Friends' Interest in Student's Progress

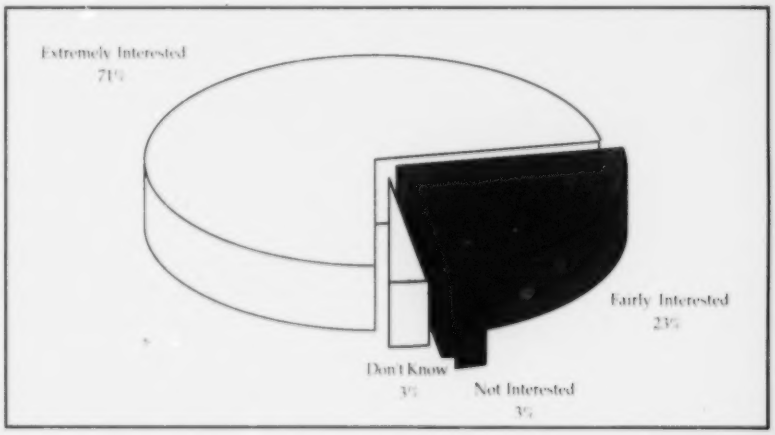
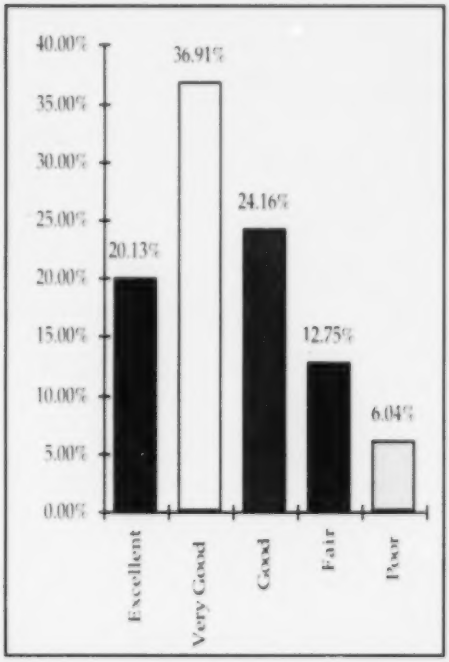


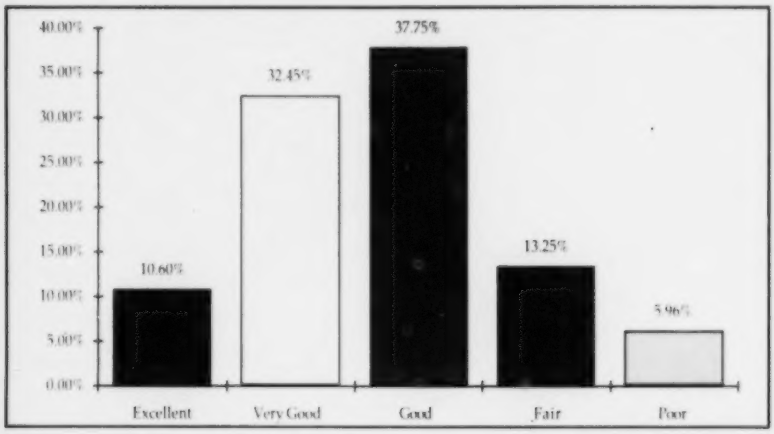
Figure 23
Parents Interest in Student's Progress

Figure 24
Students' Relationship with Other Latino Students



described their relationships as poor. The positive rating of their relationships with other Latino students is largely a result of close contact with other Latino students on campus.

Figure 25
Students' Relationship with Non-Latino Students

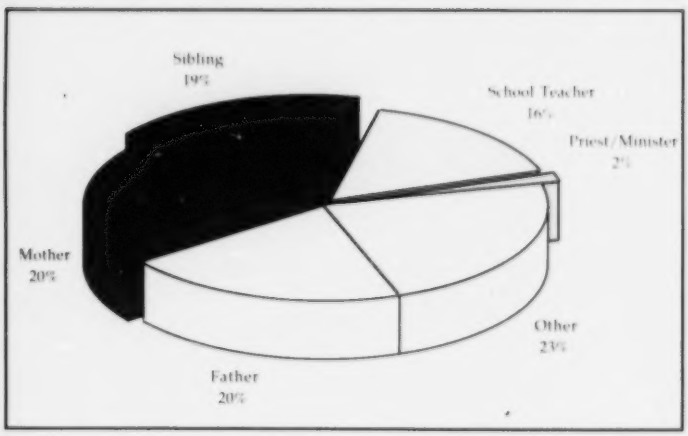


The relationships that Latino students have with non-Latino students on campus is generally very positive. The majority of Latino students describe their relationship with non-Latino students on campus as ranging from good to excellent. The excellent and very good categories, though, are not as high as those found in their relationships with other Latino students (See Figure 25).

The value of the family as a viable support system becomes quite clear when we consider that six out of ten (59%) of the role models identified were family members. An equal number of students said their father, mother, or a sibling were their personal role models. *Former school teachers were the largest single group selected as role models outside of their immediate family* (See Figure 26).

The fact that the Latino family has such a significant impact on the future success of the children is dramatized by the finding that the family is the primary source of role models for these upwardly mobile college students. This conclusion is further supported by the fact that nine out of ten (89%) students reported that their parents encouraged them to continue their education and become a success in life.

Figure 26
Role Model of Students



One of the most significant findings of this study was the discovery that six out of ten students felt the lack of financial aid was the most serious obstacle to the achievement of their educational goals. The second most serious problem facing them was the shortage

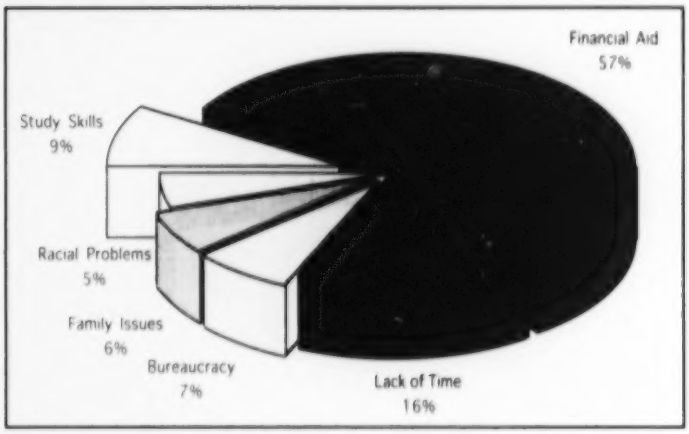


Figure 27
Major Obstacles to Education

of time. The lack of time is obvious in view of the high level of commitment that they have to their studies, work, family and community (See Figure 27).

High School Background

An interesting aspect of this study was the review of the high school experience of these students. Since only seven percent of Latinos graduate from college, it is a necessary to ask how these students are different from high school students who do not go to college.

Perhaps the first clue to their academic success is their ability to stay in high school and prepare for college. When asked to provide an estimate of their high school grades, eight out of ten said they were A or B students. Only one out of five were C students (See Table 4).

Table 4
Overall High School Grade Point Average

GPA	PERCENT
2.0 to 2.9	21 percent
3.0 to 3.5	47 percent
3.6 to 4.0	32 percent

When compared to other Latino students in their high schools, these students were among the top in their class. To determine if this was the case, we asked the students to give an estimate of their overall academic rank in high school. Four out of ten (40%) placed themselves in the top 15 percent of their class and three out of ten (29%) said they were in the top 20 percent.

Most of the students in this study are products of the public education system; three out of four graduated from public high schools. One out of five graduated from Catholic high schools (See Figure 28).

Over 90 percent of Latinos living in California today are urban residents. Half of the students in this study attended high

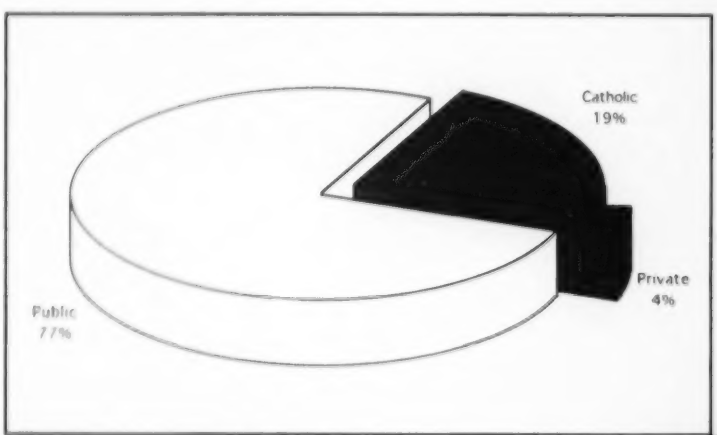
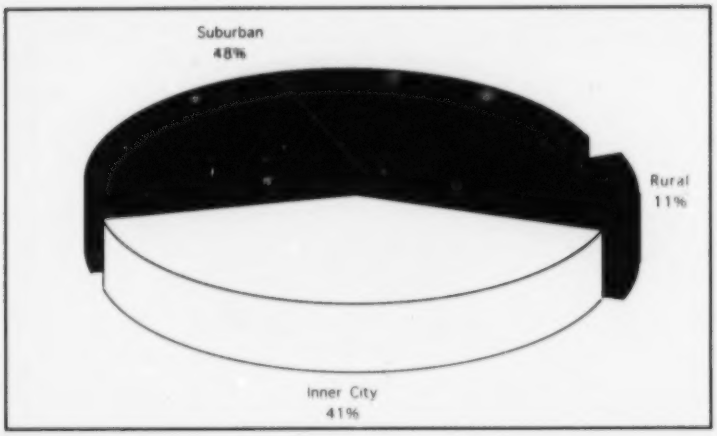


Figure 28
Type of High School Attended by Students

Figure 29
Location of High School Attended by Students

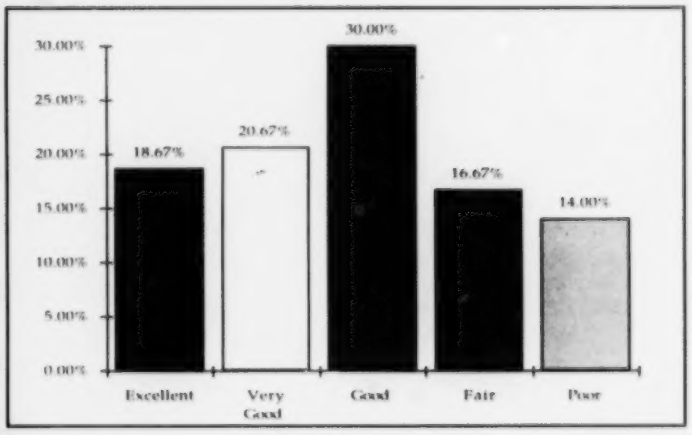


school in a suburban location, and only one out of ten graduated from high school in a rural area of the state. Only four out of ten attended large inner city high schools (See Figure 29).

Nonetheless the fact that half of the students attended high school in the suburbs does seem anomalous. This might indicate that Latino students enrolled in California State University and University of California campuses are different from other Latino students who do not go to college. It may be that life in a suburban community offers more opportunities (educational, economic, social, etc.) for adolescents than life in the inner city.

When asked to rate the quality of their high school education, one out of five students said that his or her educational experience was excellent, and an equal number described it as very good. Three out of ten said that their educational experience was good. Only one out of seven rated her or his high school education as poor (See Figure 30).

Figure 30
Quality of Education Received in High School



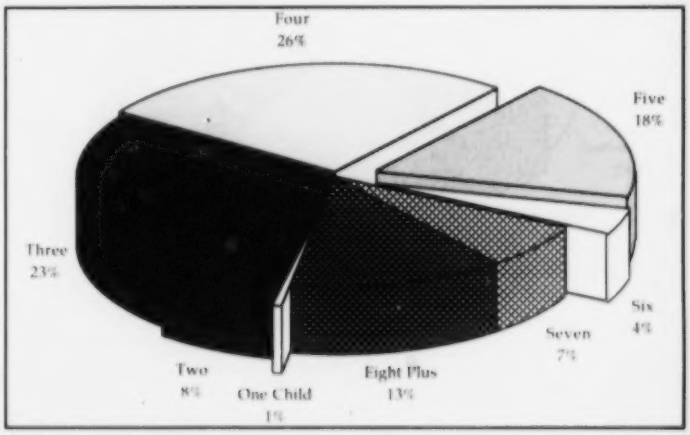
The fact that seven out of ten students felt they received a quality education in high school is very significant. This supports the idea that students who are encouraged to succeed in high school and are supported in their educational goals can achieve and be successful in college.

Racial discrimination was not a serious problem for the students in this study. While half (48%) believe that Latinos are victims of discrimination in the greater society, only three out of ten (28%) said that they experienced personal acts of discrimination while attending high school. This fact may indicate a gradual change in race relations and a higher level of

tolerance for ethnic and racial diversity in our public schools. The educational experience of these students is unique and the fact that only three out of ten were victims of discrimination, reflects this overall uniqueness.

Family Background Characteristics

Figure 31
Family Size of Students' Families



Within the Latino community the family is the primary basis of support and social cohesion. As previously mentioned, the *students stated that family support and encouragement was essential to their success in college.* It is important to know something about the family background of these students.

Latino families have been known to have high fertility rates and larger families. This survey reveals that the family size was, in fact, significantly larger than the average family size in the nation. The average family size in the U.S. today is approximately 1.8 children per household. In comparison, fewer than one out of ten (8%) of our students was raised in a family with only two children. One out of four was raised in a three child family household, and an equal number was raised in a four child family household. It was surprising to discover that *42 percent of our students was raised in a family with five or more children; in fact one out of seven (13%) of the students was raised in a family with eight or more children* (See Figure 31).

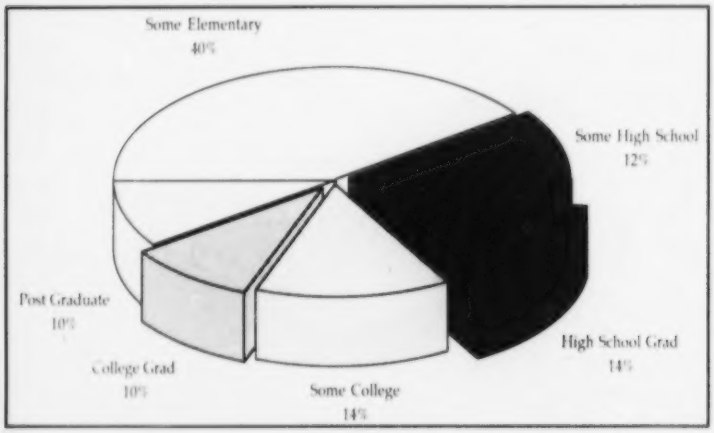
The majority of the students were raised in large families. In view of the low economic status of most Latino families in California and the high poverty rates in the Latino community, it is likely that most of the students surveyed were raised in an environment with limited resources and opportunities.

A consistent cultural characteristic of Latino families is the stratification by gender and by age. Traditional Latino families are strictly bifurcated by gender, as the family constellation is based on the clear separation of men and women. This pattern usually results in the creation of a man's world and a woman's world within the family. In addition the family is stratified by age, with the eldest child having the greater power and authority in the family. The recognition of age gradations is particularly important in relationships between brothers in the family. As a result, the eldest son or daughter is always given additional duties and responsibilities and is rewarded with respect and power in the family.

In view of these cultural considerations it is interesting to discover that half of our students (46%) were the eldest child in their families. And it is important to note that *half (48%) of all students said they were the first person in their family to attend college.* One-third (36%) of the students were the second born child in the family.

The first born child in a large Latino family is usually burdened with many responsibilities. For example, they are expected to be a role model for

Figure 32
Fathers' Highest Level of Educational Achievement



the other children in the family. The fact that half of the students are the first born child and are doing well in college is very encouraging for the younger siblings in these families.

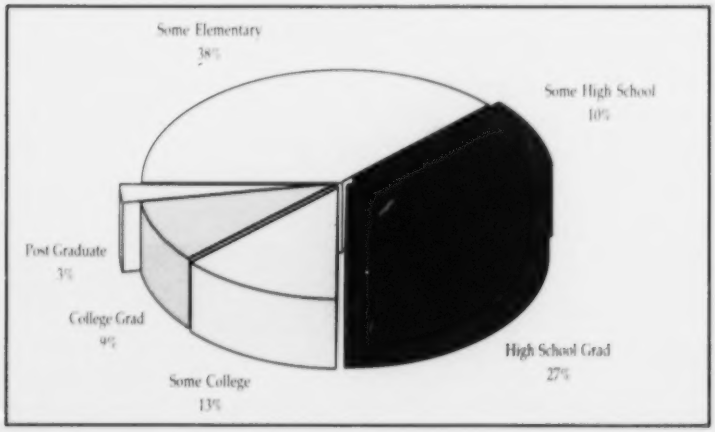
When asked if they had other relatives who attended or were attending college, seven out of ten (68%) said they had a cousin who was attending college and four out of ten (42%) had a cousin who had graduated from college. Within their parent's generation four out of ten (39%) said they had an aunt or uncle who graduated from college.

Given these relatively high rates of college attendance and college graduation within their extended families, we conclude that the students surveyed are unique in this regard. The percentage of family members who have attended college among Latino families in general is significantly lower than the rate discovered among these students.

Closely related to this question of college attendance and college graduation among family members, is the fact that one out of seven of their fathers had attended college and, even more impressive, one out of five has graduated from college. On the other hand, two out of five of their fathers had only attended elementary school (See Figure 32).

The fact that 20 percent of their fathers are college graduates is particularly significant, since only six percent of Latinos living in California today are college graduates. Therefore, their families have a college graduation rate that is three times higher than expected. This means that some of the students were raised in households that had positive role models.

Figure 33
Mothers' Highest Level of Educational Achievement



In view of the strong traditions held by most Latino families regarding the strict division of labor and clearly defined sex roles, it is surprising to discover that 10 percent of the mothers of the students were college graduates and that three percent held graduate degrees. In addition, one out of seven of the mothers had attended college and almost three out of ten had graduated from high school (See Figure 33).

The discovery that such a significant proportion of mothers were college graduates, or had some college experience, is very significant in understanding the college track that was selected by the students. And the fact that almost two-thirds of the students in this study are women, may be related to the higher than average college attendance and graduation rate among Latino mothers. This is a case where mothers served as very positive role models for their daughters and strongly encouraged them to contin-

ue their education and obtain a college degree.

Over the years, sociologists have learned that immigrants and the children of immigrants work harder and are more determined to succeed than comparable native born groups. In this case the drive and determination to succeed among immigrant families seems to be one of the important variables in understanding the academic success of our students.

Two-thirds (67%) of the parents of our students are foreign born. Therefore many of our students were the children of immigrant parents, who inspire them to succeed in American society. Obviously, these parents viewed America as the land of opportunity and encouraged their children to work and study hard in school and continue on to college.

Slightly more fathers (68%) than mothers (66%) were foreign born. Of the foreign born parents, three out of four (74%) were born in Mexico and one out of six (17%) was born in South America.

In view of the high divorce rates in California, it is surprising to discover that more than eight out of ten of our students' parents are still married. Only one out of ten of their parents was divorced.

The educational success of the students and their determination to reach their academic goals can be attributed to a strong family support base and the stability of their parents' marital union and other cultural influences. This is true since divorce and broken families have traditionally been blamed for a whole host of problems and academic failure among all youth in American society.

According to the U.S. Census, approximately three out of four Latinos in California hold blue collar positions and only one out of four hold white collar or professional-technical positions. In our study we found that the occupational distribution of the fathers of our students was underrepresented in blue collar jobs and overrepresented in white collar and professional positions. Only half (56%) of their fathers were holding blue collar jobs, while one out of five (22%) were in white collar positions and one out of seven (13%) was a professional.

Overall, four out of ten (41%) of their fathers were either in white collar positions, professionals, or self employed. These are the very individuals who would have higher than average expectations for their children and would, therefore, expect them to go to college and obtain a graduate degree in their field of interest. Therefore, it would be expected that these families are supportive of their children's educational goals.

In addition to the encouragement and support that the students receive from their parents, it is important to point out that most come from households where hard work is emphasized and expected. The fact that immigrants arrive in America with a very strong work ethic is clear among their fathers, as two-thirds (67%) worked more than 40 hours a week. Two out of five (41%) fathers worked 50 hours or more per week. This is possible since it is not uncommon for Latino immigrants to hold full-time work, plus one or two part-time jobs.

One of the most important characteristics of being a man and a responsible parent is to provide for one's family. In the Latino culture hard work defines the man. It is clear that the immigrant fathers of these students instilled a strong work ethnic in them and gave them the determination to succeed against all odds.

Despite their strong work ethic, the students reported that one-third (34%) of their fathers experienced periods of chronic unemployment. Unfortunately, this is simply a reflection of the fact that immigrants are often relegated to the least desirable jobs and to industries that are known to have periods of unemployment.

Almost four out of ten (37%) of the mothers of our students were full-time homemakers. But one-third (33%) held white collar positions, and one out of five (22%) was a blue collar worker. Only three percent of their mothers were professionals and three percent were self employed.

Table 5
Total Family Income

INCOME	PERCENT
Less than $10,000	4 percent
$10,000 - $14,999	8 percent
$15,000 - $19,999	12 percent
$20,000 - $24,999	11 percent
$25,000 - $29,999	11 percent
$30,000 - $34,999	6 percent
$35,000 - $39,999	10 percent
$40,000 - $49,999	14 percent
$50,000 Plus	23 percent

Almost two out of three (63%) of the mothers were employed outside of the home. In a traditional Latino community this is a relatively high rate of female employment, particularly for mothers with children at home. The fact that our sample of students had a high rate of employment by the mother outside of the home is a significant motivating factor for these students. For having their mothers working outside of the home would make them more self-sufficient and independent. Obviously, this would have a dramatic impact on the lives of the female students in our study.

As was true of the fathers, the mothers of the students in this study also experienced periods of chronic unemployment, as three out of ten (31%) of the mothers were unemployed from time to time. Among the mothers that worked outside the home, three out of ten (29%) worked on a part-time basis and half (49%) worked 40 hours a week. One out of five (22%) mothers worked more than 40 hours a week.

Family income provides a sense of the living conditions under which our students had to live as children. One out of four of our students was raised in a family with an annual income of less than $20,000. And one out of five said that her or his family income was between $20,000 and $30,000 a year. At the upper end of the income category, one out of four said that his or her family earned $50,000 or more per year (See Table 5).

It appears that almost two out of five (38%) of these families have annual incomes of $40,000 or more, and are earning a salary well above the average annual income of Latino families in California today. The high annual income of these families is a reflection of their greater distribution in white collar and professional categories. These incomes are a result of higher levels of education and occupational mobility.

The point should be made that the average Latino family size is signifi-

cantly larger than the general population. If family size and income are correlated, it may mean that their annual income must support more individuals than one would expect in a typical White American family. Furthermore, the high income Latino families are being supported by two or more incomes. As was made clear in our previous discussion, two-thirds of the mothers in these families were employed outside of the home and most of these (70%) worked 40 or more hours a week.

While these families had a higher annual income than the average Latino family living in California, few of these families were well-off by any standard. Since these families are large, they are only able to supply their children with the basics. This is supported by the fact that only one out of seven (14%) of our students said they had experienced poverty as a child. Therefore, most students received the basics, but some lived in a relatively comfortable household environment as children.

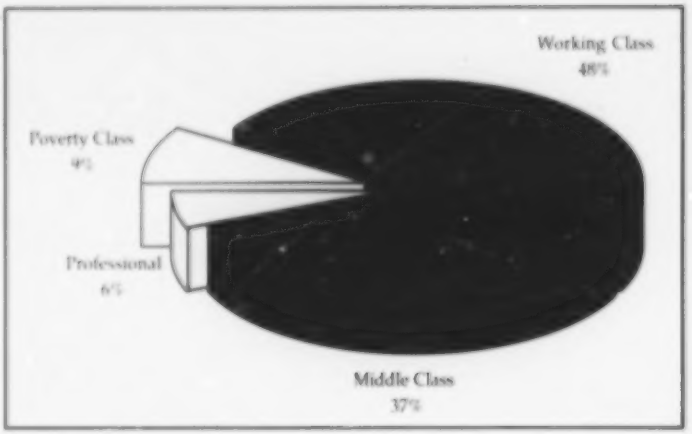


Figure 34
Family's Social Class Background

When asked to describe their family's social class background, half of our students said that they came from working class families. Almost four out of ten described their family background as middle class and only six percent said they came from a professional family background. At the other end of the socio-economic spectrum, one out of ten of the students reported that she or he came from a poverty background (See Figure 34).

It was encouraging to learn that almost half of the students (45%) felt their family's socio-economic status had improved over the years, while one out of ten (9%) said their family's socio-economic status had improved dramatically over the years. Only 12 percent of the students said their family's status had gotten worse, while one out of three (34%) felt that it had stayed the same.

Conclusion & Challenge:

As never seen before, a tidal wave of new students is quickly approaching the gates of California's institutions of higher education. Latino high school graduates are experiencing the highest rate of growth of any ethnic group in California. The high school graduating class of 2006 is expected to be 76 percent larger than the high school graduating class of 1991. In other words, 90,000 more Latino students will be seeking access to higher education in the year 2006.[28] Are California's colleges and universities prepared for the magnitude this tidal wave of students presents?

It is difficult to answer this question, when out of every 1,000 Latino students entering the ninth grade in California, only 14 will receive a baccalaureate degree from a public university in five years.[29] California's colleges and universities must begin to plan for this new wave of students and ensure

[28] "K-12 Public High School Graduates By Ethnicity: History and Projection – 1992 Series," State of California, Department of Finance, Demographic Unit, Sacramento, CA 1985.

[29] Joint Committee for the Review of the Master Plan, Sacramento, CA 1989.

that they successfully complete a baccalaureate degree. The days of revolving doors in higher education must end. Campuses must make stronger commitments to retain and graduate students.

Planning for this new wave of students cannot follow traditional approaches. Students in this wave are the most diverse in the history of California's public high school graduates. The tidal wave California is expecting will not only be ethnically diverse but socio-economically diverse as well. Current retention programs, while helpful, have not been as effective as they could be. Development of new and innovative retention programs for Latino college students must incorporate a myriad of issues, including the Latino family. For example, sociologist Vincent Tinto observed that "...one of the clearest outcomes of research on student departure is the finding that individual experiences within college after entry are more important to persistence and departure than what has gone on before."[10] Thus, given that Latino students do not have a natural support system and the cultural shock they experience on campus, new retention programs must provide a support system and lessen culture shock.

Our study revealed the importance that peers, high school teachers and family have on a Latino student's decision to leave or remain in school. In addition, the financial burden and time away from campus and academic life in fulfillment of the need to work prove great obstacles in designing retention programs.

New retention programs cost additional dollars and this expense comes at a time when California is experiencing its worst economic recession since the Depression. However, in the long run, California's economy will worsen unless an investment is made now to educate the growing Latino population in California. As California's working class becomes increasingly Latino, they will be called upon to support the economic infrastructure. Unless the Latino community is well educated, California's economy and future are in peril.

The challenge that faces California's institutions of higher education is great. But the challenge need not be faced alone. College and university leaders must invite and foster greater community participation in the development of policy and programs. Higher education alone is unable to meet the challenges that this tidal wave of students presents. However, with the Latino community, as equal partners, this challenge, if properly addressed, can lead to a brighter future for all.

[10] Tinto, Vincent, "The Principles of Effective Retention," p. 6.

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APPENDIX I:

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July 30, 1993

Mr. John C. Gamboa, Executive Director
Mr. Roberto P. Haro, Member of the Board
Mr. Guillermo Rodriguez, Jr., Director of Policy & Research
Latino Issues Forum
1535 Mission Street
San Francisco, California 94103

Dear John, Roberto, & Guillermo:

Thank you for your letter of July 2 describing the scope of your study on Latino student retention and requesting help in identifying appropriate individuals at selected campuses who might be able to assist you in this endeavor.

I believe the most appropriate persons for you to work with at the campuses you have selected are the Vice Chancellors responsible for student retention programs. Enclosed is a list of those Vice Chancellors and information on how you can reach them. By copy of this letter, I am informing them and their Chancellor that you will be in touch with the Vice Chancellors directly.

Good luck with your study. I am pleased that we can assist you in this effort and look forward to reading the results of your work.

Cordially,

J.W. Peltason

Enclosure

cc: Provost Massey
Chancellor Orbach
Chancellor Pister
Chancellor Tien
Chancellor Wilkening
Vice Chancellor Doby
Vice Chancellor Ellis
Vice Chancellor Leo
Vice Chancellor Mitchell
Vice Chancellor Moore
Assistant Vice President Galligani

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OFFICE OF THE CHANCELLOR

July 14, 1993

John C. Gamboa, Roberto P. Haro, and
Guillermo Rodriguez, Jr.
Latino Issues Forum
1535 Mission Street
San Francisco, California 94103

Dear John, Roberto, and Guillermo:

Congratulations on receiving funding from the Ford Foundation to undertake a pilot study on the role that the Latino family may play in influencing Latino college student retention. We are pleased to help you inform target campuses of your study.

Dr. Philip Garcia in Analytic Studies at the Chancellor's Office has been assigned to assist the Forum in disseminating information about the study. In addition, I am providing copies of this letter and yours to the presidents of the campuses targeted as potential sites from which the 300 Latino students and families will be selected.

To help give us a deeper understanding of the pilot study you are about to undertake and to facilitate initial discussions, please send Dr. Garcia copies of the pilot study prospectus and research plan. We look forward to hearing from you.

Sincerely,

Barry Munitz
Chancellor

cc: Dr. Milton A. Gordon, CSU, Fullerton
Dr. James M. Rosser, CSU, Los Angeles
Dr. Karl Anatol, CSU, Long Beach
Dr. Blenda J. Wilson, CSU, Northridge
Dr. Bob Suzuki, California State Polytechnic University, Pomona
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IDENTIFIERS American Freshmen Survey

ABSTRACT

This study used data on the distribution of college students by income background to analyze college choice, particularly examining how family income and college choice correlations have changed over time. The study, using data from the national American Freshmen Survey, compared results from 1993 and computed their constant dollar equivalents in two previous years, 1989 and 1980. Data were analyzed to examine the distribution of students in a particular income group across institutional types and to examine the income distribution of students attending a particular type of institution. Results showed that, while the share of middle income students in all of higher education declined, in 1980 21.5 percent of middle income students were enrolled at private, four-year colleges and universities and in 1993, 21.2 percent were in those institutions. Low income students were increasingly represented at public two-year colleges, while representations of middle and upper income students in these colleges declined. Also the number of middle income students at public two-year institutions has declined and the number at public four-year institutions has increased. Private four-year colleges have been enrolling a declining share of upper income students, and public colleges' share of wealthier students has increased. Thus private colleges have a steady proportion of middle income students but a decline in upper income students. (JB)

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DRAFT

College Choice and Family Income: Changes Over Time in the Higher Education Destinations of Students From Different Income Backgrounds

Michael S. McPherson
Williams College

Morton Owen Schapiro
University of Southern California

November 1994

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Introduction

While a great deal of attention has been paid by higher education researchers to the question of "access" -- **whether** students from various economic backgrounds attend college, less attention has been paid to the question of "choice" -- **where** do these students go. This paper uses data on the distribution of college students by income background in an attempt to address the often elusive issue of choice in higher education.[1]

Much of the popular discussion regarding where students go involves middle income students. It is often suspected that students from middle income backgrounds have been most affected by the considerable real increases in tuition at private colleges and universities. Students from lower income backgrounds qualify for need-based financial aid, lessening the chance that these students experience an affordability problem. Students from upper income backgrounds receive a different but analogous form of financial aid -- parental contributions that do not require major proportions of available annual incomes. But, the story goes, when tuitions rise faster than other economic indicators, students from middle-income backgrounds are forced to switch to

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[1]Our earlier look at the choice question, done jointly with Larry H. Litten and Michael P. O'Malley, can be found in Michael S. McPherson and Morton Owen Schapiro, Keeping College Affordable: Government and Educational Opportunity (The Brookings Institution, 1991), Chapter V, "Incomes, Prices, and College Choice."

less costly educational alternatives.[2]

We turn now to an empirical examination of changes over time in the higher education destination for students of different economic backgrounds. This allows us to consider not only the "middle income melt" topic described above, but also to examine the broader question of who goes where and how that compares with a decade ago.

Description of Data Set and Income Categories

This study relies on data from an annual survey of college freshmen, The American Freshman Survey. These data are self-reported by students, thereby undoubtedly introducing measurement error. Nevertheless, we use these data for several reasons.[3] First, they are the only consistently reported annual data on the college choices of students from different income backgrounds. Second, there is no reason to expect the biases in student reporting of income to vary systematically over time. Hence, while the data may be inaccurate in a particular year, their

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[2]For years, the view that middle-income students -- too rich for financial aid but too poor to afford private school tuitions -- are increasingly showing up at public institutions has been stated as truth in the national media. See, for example, Robert Kuttner, "The Squeeze on Young Families," Washington Post, September 8, 1989, p. A23.

[3]We, and others, have used these data before. See, for example, Michael S. McPherson and Morton Owen Schapiro, "Does Student Aid Affect College Enrollment? New Evidence on a Persistent Controversy," The American Economic Review, March 1991, pp. 309-318.

variation over time should be more reliable. Therefore, while we discuss the distribution of students by income at a given time, we concentrate more on changes over time in that distribution.

Our first step is to disaggregate income distribution data into reasonable groupings that can be traced over time. The most recent available survey data are from the Fall of 1993, during which time students were asked to report parents' income for 1992. We have created six basic income brackets from those data (lower, lower-middle, middle, upper-middle, upper, and richest) and computed their constant dollar equivalents in two previous survey years, 1989 and 1980. We also create three useful summary categories -- low income, the sum of lower income and lower-middle income; mid income, the sum of middle and upper-middle income; and high income, the sum of upper income and the richest category. The 1993 income bands closely approximate constant-dollar equivalents for those used in 1989 and 1980, but are not exact adjustments because we are constrained by the response categories printed on the questionnaires.[4] The constant-dollar income groupings from the questionnaires follow (in thousands of dollars):[5]

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[4]The selection of the years 1989 and 1980 was made with the aim of having the income brackets correspond as closely as possible with the inflation adjusted boundaries.

[5]The precise inflation adjusted categories in 1989 would break down as follows (in thousands of dollars): <16.9, 16.9-25.3, 25.3-50.6, 50.6-84.3, 84.3-168.7, and >168.7. For 1980 the categories would be: <10.3, 10.3-15.5, 15.5-31.0, 31.0-51.7, 51.7-103.5, and >103.5. This reflects inflation between 1979 (the 1980 survey asked students to report parent's income in 1979) and 1992 of 93.3% and inflation between 1988 (the 1989

Income Group	1980	1989	1993
Lower	<10	<15	<20
Lower-middle	10-15	15-25	20-30
[Low Income	<15	<25	<30]
Middle	15-30	25-50	30-60
Upper-middle	30-50	50-75	60-100
[Mid Income	15-50	25-75	30-100]
Upper	50-100	75-150	100-200
Richest	>100	>150	>200
[High Income	>50	>75	>100]

Hence, our low income summary measure corresponds to income below $30,000 in 1993, below $25,000 in 1989, and below $15,000 in 1980; the mid income category corresponds to income between $30,000 and $100,000 in 1993, between $25,000 and $75,000 in 1989, and between $15,000 and $50,000 in 1980; and the high income category corresponds to income above $100,000 in 1993, above $75,000 in 1989, and above $50,000 in 1980.

Note that in these summary measures we have placed upper-middle income ($60,000-$100,000 in 1993) with mid income rather than with high income. This is at variance with national income

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survey asked students to report parent's income in 1988) and 1992 of 18.6%.

distribution data. Median family income, even when families are restricted to those with college-age children, is below the starting point of our upper-middle income bracket. However, many families in the upper-middle income bracket are eligible for need-based financial aid at private colleges and universities, depending on gross tuition charges, the number of children in school, and other factors. Thus, students from families in this income range are often thought of as "low-need" by financial aid officers at private institutions. On the other hand, students in our high income summary category are typically "no-need".

There are two different ways to present our data. The first examines the distribution of students in a particular income group across institutional types. This allows us to ask the question, for example: What percentage of all middle income students who attend colleges or universities matriculate at private universities? The examination of changes in that percentage would help us address the issue of middle income "melt" which was referred to above.

The other way to look at the data is to examine the income distribution of students attending a particular type of institution. For example, of all the students attending public universities, what proportion are from the richest income group? How has this changed over time?

These two ways of presenting the data will often lead to the same conclusion. If, for example, a large number of middle income students were leaving private institutions for public

institutions, the percentage of middle income students attending private schools would fall, and it is likely that the proportion of middle income students among all students attending private schools would also be falling over time. However, that need not be the case. If the enrollment rates for middle income students were rising relative to that of other income groups, the percentage of middle income students attending private schools could fall while the percentage of all students attending private schools who are in the middle income range could rise. In the next section, the data are organized both ways.

Student Income Background and School Choice

Table 1 presents data on the distribution of students from different income backgrounds across institutional types. The income brackets here are our summary measures, low income, mid income, and high income. Complete income breakdowns are presented in Appendix Table 1-A. The institutional types are private universities, private four-year colleges, private two-year colleges, public universities, public four-year colleges, and public two-year colleges. Figures for all private institutions and all public institutions are also provided.

In 1993, 24.2% of students attended private institutions. That figure represents a considerable drop from 26.5% only four years earlier, although the 1989 value was slightly above the 26.0% figure in 1980. Thus, while our data do not indicate a

long-term downward trend in the percentage of students at private colleges and universities, the recent trend is clearly negative. With total first-time, full-time freshman enrollment in 1993 of around 1.6 million, a decline of 2.3 percentage points between 1989 and 1993 represents about 37,000 fewer students enrolled in private institutions relative to what would have occurred had the private share remained at the 1989 level.[6] Looking within the private sector, the share of all students attending private universities has held rather steady over time, starting at 5.2%, rising to 5.7%, and ending in 1993 above the 1980 value at 5.5%. The share at private four-year colleges fell a bit over time, from 16.8% to 16.3%, but the most significant change was in the share attending two-year colleges, going from 4.0% down to 2.4%.

The gain in share in the public sector was also not across the board. The percentage of students attending public universities began the period at 18.1%, rose to 18.9%, but ended the period in 1993 back at the 1980 level. The share at public two-year colleges actually fell, with the increase from 1989 to 1993 (32.1% to 34.0%) not large enough to offset the decline from 1980 to 1989 (35.8% to 32.1%). The only type of public institutions to gain in share were the public four-year colleges, with their share rising from 20.2% to 22.6% to 23.8%. That increase represents about 57,000 more students than would have been enrolled in that sector had the enrollment distribution

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[6]The actual number of freshmen enrolled at private schools in 1993 was about 380,000.

remained as it was in 1980.[7]

Turning now to the income breakdowns, it is clear that the percentage of students attending private schools varies considerably with income. Only 18.3% of low income students attended private colleges and universities, a figure that rises to 23.4% for mid income students, and to 42.5% for high income students. Only 2.6% of all low income students enrolled in higher education are at private universities, with 13.2% at private four-year colleges. On the other hand, 16.0% of all high income students enrolled in higher education are at private universities and 23.6% are at private four-year colleges. Mid income students had intermediate enrollment percentages of 4.8% and 16.4%. Thus, the probability of a student attending a four-year private college or university depends critically on his or her parent's income.

The chances that a student will attend a public university also depend positively on parent's income, although increased income lowers the chances that a student will attend a public four-year college -- 12.1% of low income students attend public universities compared with 25.9% of high income students, 22.3% of low income students attend public four-year colleges compared with 17.8% of high income students. Perhaps the most striking finding is that 41.9% of high income students attend a university (private or public), compared with only 14.7% of low income

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[7]Actual freshman enrollment at public four-year colleges in 1993 was about 370,000.

students. Where do low income students disproportionately enroll? A whopping 47.2% of low income students are at public two-year colleges, almost three and a half times the percentage of high income students (13.8%). How have these proportions changed over time?

Comparing 1993 to 1980, the percentage of high income students who attend either private or public universities rose from 39.3% to 41.9%, with the increase shared by public universities (which went from 24.9% to 25.9%) and private universities (which went from 14.4% to 16.0%). Thus, while it is true that high income students are less likely to attend private institutions in 1993 than in 1980 (42.5% versus 43.7%), the proportion of high income students attending private universities actually **increased** over the period. Instead, it was private four-year colleges that have suffered the loss of high income students in recent years -- the proportion of high income students who enrolled at these schools fell from 26.7% to 23.6%.[8] That fact undoubtedly accounts for the intense financial pressure that private four-year colleges have appeared to be under over the past decade, as no-need students have become

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[8]As can be seen in Appendix Table 1-A, a similar pattern is found when we isolate the experience of students from our richest income group (income over $200,000 in 1993, income over $100,000 in 1980). The proportion of these students who enrolled at private universities rose from 19.8% in 1980 to 22.7% in 1993, while the proportion who enrolled at private four-year colleges fell from 31.7% to 28.3%. Note also the increased attractiveness of public universities to highly affluent students -- that share rose from 19.6% to 23.2%. Thus, the share of all students in the richest income group who enrolled at either a private or public university increased from 39.4% in 1980 to 45.9% in 1993.

increasingly rare.[9]

Interestingly, high income students have found **public** four-year colleges increasingly attractive, with the proportion attending these schools rising from 14.7% to 17.8%. Mid income students have similarly increased there share going to public four-year colleges, from 20.2% to 25.7%, although, unlike their more affluent counterparts, they slightly decreased their share attending public universities (from 20.0% to 19.7%). The share of mid income students attending either private universities or private four-year colleges was quite stable over the period. The share of low income students attending private universities, public universities, or public four-year colleges was also quite stable, although the share of low income students attending private four-year colleges fell from 14.3% to 13.2%.

There were considerable changes over time in the attractiveness of public two-year colleges to students from different income backgrounds. It was noted earlier that 47.2% of low income students attended community colleges compared to only 13.8% of high income students. Those figures represent significant changes from 1980 when 44.2% of low income students and 16.7% of high income students attended public two-year

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[9]The situation faced by private four-year colleges (as well as other institutional types) is discussed in detail in Michael S. McPherson and Morton Owen Schapiro, "Expenditures and Revenues in American Higher Education," September 1994. An examination of how different types of institutions have used merit aid in response to enrollment pressures is contained in Michael S. McPherson and Morton Owen Schapiro, "Merit Aid: Students, Institutions, and Society," Consortium for Policy Research in Education, August 1994.

colleges. The decreased attractiveness of community colleges for high income students is reproduced in the actions of mid income students, with the percentage of mid income students attending these schools falling from 34.8% in 1980 to 31.2% in 1993. Thus, the flight of students from affluent backgrounds away from public two-year colleges from 1980 to 1993 was in marked contrast to the experience of students from low income backgrounds.

We turn now to data which examine the income distribution of students attending particular types of institutions. Table 2 uses our summary income measures while complete income breakdowns are presented in Appendix Table 2-A.

It is immediately obvious that the income distribution of students attending private universities is very different from the income distribution of students at other institutional types. In 1993, 34.1% of students at private universities were from high income backgrounds, and only 14.3% were from low income backgrounds. While students attending private four-year colleges and public universities are also relatively affluent -- with 16.9% of students at private four-year colleges and 16.6% of students at public universities in the high income category -- the representation of high income students is only about half that at private universities while the representation of low income students is higher. The two institutional types with by far the least affluent students are public four-year colleges and public two-year colleges, where only 8.7% and 4.7% of their students are from high income backgrounds, while 28.1% and 41.6%

of their students are from low income backgrounds.

Comparing 1993 and 1980, we can see considerable changes in income distributions over time. In 1980, only 25.9% of students attending private universities were from high income backgrounds, with the comparable figures for private four-year colleges and public universities being 14.7% and 12.7%. Interestingly, the addition of affluent students at private universities and four-year colleges from 1980 to 1993 was not at the expense of low income students, for whom the share remained basically unchanged over time. Instead, there were declines in the mid income group at each of these three institutional types, with the largest being the drop from 60.0% to 51.7% at private universities.

How is it possible to reconcile our finding that middle income students comprise a much smaller share of all students enrolled at private universities with our earlier discovery that the percentage of all middle income students who enroll at private universities barely changed over time? This clearly implies that middle income students are a declining share of all students attending any institution of higher education. As can be seen in Table 2, in 1980 62.4% of all students were from the mid income group versus only 58.4% in 1993. Whether this decline represents changes in national income distributions (fewer families in the middle class and more either rich or poor as a result of the Reagan-Bush years) or differential changes in enrollment rates (middle income students increasing their college enrollment rates less than students from richer or poorer

families), the fact is that there have been striking changes over time in the income backgrounds of students at different types of institutions. Middle income students have been replaced by high income students in significant numbers at private universities and, to a lesser extent, at private four-year colleges. This appears to be the "middle income melt" phenomenon addressed so often in the press. However, there is a big difference. Middle income students are not "melting" away from private schools to public schools -- they are as likely to attend private schools as before.[10] There are simply fewer middle income students to spread around.

Finally, the increase in the share of students attending public two-year colleges who are from low income backgrounds -- from 35.1% in 1980 to 41.6% in 1993 -- is consistent with our earlier conclusion that there has been a considerable change in the attractiveness of community colleges to students of different income backgrounds. Despite the fact that the share of high income students at these schools has not declined over time, that share is very small and the share of middle income students has decreased by a sizable amount, leaving the student body much less affluent than in 1980.

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[10]Notice also that high income students have replaced middle income students at public universities as well as at private universities and private four-year colleges.

Conclusion

These findings raise doubts about some common impressions concerning "middle income melt". In one sense, there has been such a melt: the share of middle income students (defined as the group with real family incomes of $30,000 to $100,000 in 1992 dollars) in all of higher education has declined. But what most people seem to mean by middle income melt is something different from this: a redistribution of middle income students among categories of institutions, and especially from private to public institutions. Our data do not find middle income melt in this sense over the 1980-1993 period. In 1980, 21.5 percent of middle income students were enrolled at private four-year colleges and universities; in 1993, 21.2 percent were in those institutions.

The most striking movement among middle income students has in fact been within the public sector, with a sharp decline in the share of middle income students at public two-year institutions, offset by growth in the share of middle income students at public four-year institutions. Indeed, one of our most interesting findings is the increasing representation of low income students at public two-year colleges, and the declining representation of middle and upper income students there. It is of course important to remember that the relatively young, first-time full-time freshmen represented in our survey are not the predominant clientele at community colleges. Nonetheless, these data do seem worrisome. They suggest that the combined

effects of tuition increases and limitations on federal student aid may be impairing the ability of low income students to gain access to institutions other than community colleges.

A particularly illuminating discovery concerns changes in the representation of upper income students at private four-year colleges. Private four-year colleges have been enrolling a declining share of upper income students, even as public and private universities as well as public four-year colleges have attracted increasing shares of upper income students. On the other hand, the proportion of middle income students who attend private four-year colleges has been basically stable from 1980 to 1993. Although leaders at these schools have been vocal in talking about middle income melt, it appears that what they have experienced is in fact upper income melt. It seems likely that this loss of full-pay students is a significant part of the explanation for the growing interest of these schools in reviewing their student aid policies and entering into merit aid competition.

These results raise the interesting question of why there hasn't been middle income melt in the sense of movement of middle income students from more to less expensive institutions. Our data do not speak directly to the causes of the patterns we observe. But we would suggest two factors that may be at work. First, many middle income students get substantial tuition discounts at private institutions. Increases in discounting may have buffered the effects of a growing tuition gap. Second, many

public colleges and universities have experienced serious budgetary problems, raising doubts about future quality, imposing obstacles to students getting the classes they need to graduate on time, and so on. These factors may have tended to push students, including middle income students, toward private institutions, working to offset middle income melt.

But what about the finding that high income students have been leaving private four-year colleges for private and public universities? Again, we can conjecture about possible explanations. Perhaps the phenomenon of "brand-name" identification that became such an important part of American consumerism in the 1980s also took hold in higher education, with students leaving small, usually regional colleges for larger and better known universities. This explanation may also help account for the decreased attractiveness of community colleges among middle and upper income students.

While it is hard not to speculate about causes of the observed changes over time in the higher education destinations of our nation's students, the purpose of this paper is to document those changes. Our hope is that further research will help us understand those factors that have contributed to the patterns we have observed.

Table 1: Distribution of Freshman Enrollment By Income Background Across Institutional Types (Using Summary Income Measures)

1993	Low Income (<$30)	Mid Income ($30 - $100)	High Income (>$100)	All Income Groups
Private				
University	2.6%	4.8%	16.0%	5.5%
4-Year Colleges	13.2%	16.4%	23.6%	16.3%
2-Year Colleges	2.5%	2.2%	2.9%	2.4%
[All Private	18.3%	23.4%	42.5%	24.2%]
Public				
University	12.1%	19.7%	25.9%	18.1%
4-Year Colleges	22.3%	25.7%	17.8%	23.8%
2-Year Colleges	47.2%	31.2%	13.8%	34.0%
[All Public	81.6%	76.6%	57.5%	75.9%]
	100.0%	100.0%	100.0%	100.0%

1989	Low Income (<$25)	Mid Income ($25 - $75)	High Income (>$75)	All Income Groups
Private				
University	2.8%	4.6%	13.7%	5.7%
4-Year Colleges	15.0%	15.7%	23.8%	16.9%
2-Year Colleges	4.2%	3.5%	4.8%	3.9%
[All Private	22.0%	23.8%	42.3%	26.5%]
Public				
University	13.9%	19.0%	25.4%	18.9%
4-Year Colleges	22.4%	24.0%	17.6%	22.6%
2-Year Colleges	41.6%	33.2%	14.7%	32.1%
[All Public	77.9%	76.2%	57.7%	73.6%]
	100.0%	100.0%	100.0%	100.0%

1980	Low Income (<$15)	Mid Income ($15 - $50)	High Income (>$50)	All Income Groups
Private				
University	2.6%	5.0%	14.4%	5.2%
4-Year Colleges	14.3%	16.5%	26.7%	16.8%
2-Year Colleges	5.3%	3.6%	2.6%	4.0%
[All Private	22.2%	25.1%	43.7%	26.0%]
Public				
University	11.6%	20.0%	24.9%	18.1%
4-Year Colleges	22.1%	20.2%	14.7%	20.2%
2-Year Colleges	44.2%	34.8%	16.7%	35.8%
[All Public	77.9%	75.0%	56.3%	74.1%]
	100.0%	100.0%	100.0%	100.0%

Table 2: Distribution of Freshman Enrollment By Different Institutional Types Across Income Backgrounds (Using Summary Income Measures)

1993	Low Income (<$30)	Mid Income ($30 - $100)	High Income (>$100)	
Private				
University	14.3%	51.7%	34.1%	100.0%
4-Year Colleges	24.3%	58.9%	16.9%	100.0%
2-Year Colleges	32.3%	53.4%	14.3%	100.0%
Public				
University	20.0%	63.4%	16.6%	100.0%
4-Year Colleges	28.1%	63.2%	8.7%	100.0%
2-Year Colleges	41.6%	53.7%	4.7%	100.0%
All Institutional Types	29.9%	58.4%	11.6%	100.0%

1989	Low Income (<$25)	Mid Income ($25 - $75)	High Income (>$75)	
Private				
University	11.4%	49.4%	39.2%	100.0%
4-Year Colleges	20.6%	56.4%	23.1%	100.0%
2-Year Colleges	25.3%	54.5%	20.2%	100.0%
Public				
University	17.0%	61.0%	21.9%	100.0%
4-Year Colleges	22.9%	64.4%	12.7%	100.0%
2-Year Colleges	29.9%	62.6%	7.5%	100.0%
All Institutional Types	23.1%	60.6%	16.3%	100.0%

1980	Low Income (<$15)	Mid Income ($15 - $50)	High Income (>$50)	
Private				
University	14.1%	60.0%	25.9%	100.0%
4-Year Colleges	24.1%	61.2%	14.7%	100.0%
2-Year Colleges	38.1%	55.9%	6.0%	100.0%
Public				
University	18.2%	69.1%	12.7%	100.0%
4-Year Colleges	30.9%	62.4%	6.7%	100.0%
2-Year Colleges	35.1%	60.6%	4.3%	100.0%
All Institutional Types	28.4%	62.4%	9.2%	100.0%

Table 1-A: Distribution of Freshman Enrollment By Income Background Across Institutional Types (Using All Income Measures)

1993							
		<20k	20k-30k	30k-60k	60k-100k	100k-200k	200k+
Private	University	2.3%	3.0%	3.8%	6.6%	13.6%	22.7%
	4-year	12.6%	14.1%	15.7%	17.8%	22.0%	28.3%
	2-year	2.6%	2.5%	2.2%	2.1%	2.7%	3.4%
Publi	University	11.0%	13.7%	17.3%	24.0%	26.9%	23.2%
	4-year	20.6%	24.6%	25.5%	26.1%	19.7%	12.4%
	2-year	51.0%	42.2%	35.5%	23.5%	15.1%	10.0%
1989							
		<15k	15k-25k	25k-50k	50k-75k	75k-150k	150k+
		(<16.9)	(16.9k-25.	(25.3k-50.	(50.6k-84.	84.3k-168.	(168.7k+)
Private	University	2.5%	3.0%	3.8%	6.1%	11.6%	19.4%
	4-year	14.8%	15.3%	15.0%	16.8%	21.4%	30.4%
	2-year	4.4%	4.1%	3.5%	3.4%	4.3%	6.2%
Publi	University	12.8%	14.9%	17.1%	22.2%	26.2%	23.1%
	4-year	22.7%	22.2%	23.6%	24.8%	20.1%	10.8%
	2-year	42.7%	40.6%	36.9%	26.7%	16.4%	10.2%
1980							
		<10k	10k-15k	15k-30k	30k-50k	50k-100k	100k+
		(<10.3)	(10.3-15.5	(15.5-31.0	(31.0-51.7	(51.7-103.	(103.5+)
Private	University	2.2%	2.9%	3.9%	6.8%	12.8%	19.8%
	4-year	13.4%	15.1%	15.8%	17.7%	25.2%	31.7%
	2-year	5.6%	5.0%	3.7%	3.3%	2.6%	2.5%
Publi	University	10.1%	13.2%	17.4%	24.6%	26.6%	19.6%
	4-year	22.8%	21.3%	20.3%	20.1%	15.6%	11.9%
	2-year	45.9%	42.4%	38.9%	27.6%	17.3%	14.5%

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Table 2-A: Distribution of Freshman Enrollment By Different Institutional Types Across Income Backgrounds (Using All Income Measures)

1993							
		<20k	20k-30k	30k-60k	60k-100k	100k-200k	200k+
Private	University	7.4%	6.9%	26.1%	25.6%	21.4%	12.7%
	4-year	13.2%	11.0%	35.8%	23.0%	11.6%	5.3%
	2-year	18.7%	13.5%	34.9%	18.5%	9.9%	4.4%
Publi	University	10.4%	9.6%	35.5%	27.9%	12.7%	3.9%
	4-year	14.9%	13.2%	40.1%	23.2%	7.1%	1.6%
	2-year	25.8%	15.8%	39.0%	14.6%	3.8%	0.9%
	All	17.2%	12.7%	37.3%	21.1%	8.6%	3.1%
1989							
		<15k	15k-25k	25k-50k	50k-75k	75k-150k	150k+
		(<16.9)	(16.9k-25.	(25.3k-50.	(50.6k-84.	84.3k-168.	(168.7k+)
Private	University	4.8%	6.6%	25.4%	23.9%	24.2%	15.0%
	4-year	9.4%	11.2%	34.0%	22.3%	15.1%	8.0%
	2-year	12.3%	13.0%	34.8%	19.6%	13.1%	7.1%
Publi	University	7.3%	9.7%	34.6%	26.5%	16.5%	5.4%
	4-year	10.8%	12.1%	39.8%	24.6%	10.6%	2.1%
	2-year	14.3%	15.6%	43.9%	18.7%	6.1%	1.4%
	All	10.7%	12.3%	38.1%	22.4%	11.9%	4.4%
1980							
		<10k	10k-15k	15k-30k	30k-50k	50k-100k	100k+
		(<10.3)	(10.3-15.5	(15.5-31.0	(31.0-51.7	(51.7-103.	(103.5+)
Private	University	6.3%	7.8%	30.2%	29.9%	17.4%	8.5%
	4-year	11.6%	12.5%	37.4%	23.8%	10.5%	4.2%
	2-year	20.5%	17.6%	37.5%	18.5%	4.6%	1.4%
Publi	University	8.1%	10.1%	38.3%	30.7%	10.3%	2.4%
	4-year	16.4%	14.6%	40.0%	22.4%	5.4%	1.3%
	2-year	18.7%	16.4%	43.3%	17.4%	3.4%	0.9%
	All	14.6%	13.8%	39.8%	22.6%	7.0%	2.2%